The Mining Journal,

RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

[The MINING JOURNAL is Registered at the General Post Office as a Newspaper, and for Transmission Abroad.]

No. 2230.—VOL. XLVIII. LONDON, SATURDAY, MAY 18, 1878. [WITH SUPPLEMENT.] {PRICE ..... SIXPENCE. PER ANNUM, BY POST, £1 4s.

MR. JAMES H. CROFTS, STOCK AND SHARE BROKER, AND MINING SHARE DEALER,
No. 1, FINCH LANE, CORNHILL, LONDON, E.C.
ESTABLISHED 1842.

BUSINESS transacted in all descriptions of MINING Stocks and Shares (British and Foreign), Consols, Banks, Bonds (Foreign and Colonial), Railways, Miscellaneous, Insurance, Assurance, Telegraph, Shipping, Canal, Gas, Water, and Dock Shares.

BUSINESS negociated in Stocks and Shares not having a general market value.

BUSINESS in COLLIERY and IRON Shares, and in the principal WAGON and MANUFACTURING COMPANIES of the NORTH of ENGLAND and SCOTLAND.

BUSINESS in all the principal COTTON SPINNING Shares.

Mr. J. H. CROFTS, having now established CORRESPONDING AGENCIES in all the CHIEF TOWNS of the United Kingdom, is prepared to deal in the various LOCAL Stocks and Shares at close market prices.

ACCOUNTS OPENED FOR THE FORTNIGHTLY SETTLEMENT.

A Daily Price List, issued at 5 P.M., giving latest Quotations up to close of Market. Also, on the 1st of every month a List of all Securities currently dealt in upon the Mining and Stock Exchanges, with latest prices, current dividends, rate of interest yielded at market price, &c., and every Friday a general List containing closing prices of the week.

MINES INSPECTED.

BANKERS: CITY BANK, LONDON; SOUTH CORNWALL BANK, ST. AUSTELL.

SPECIAL DEALINGS in the following, or part:—

100 Aberdaunant, 7s. 9d.	10 G. Laxey, £19.	25 Rookhope, 19s.
10 Bodidris.	25 Hultafall, £4 1s. 3d.	10 Richmond, £9⅜, x. d.
50 Cardiff & Swan, 16s 6d	75 Javali, 6s.	30 Roman Grav., £7¾.
50 Chapel House, £3¾.	15 Leadhills, £4 1s. 3d.	25 St. Harmon, 35s.
50 Chontales, 12s.	25 Llanrwst, £2⅛.	25 Tankerville, £4⅛.
100 Combmartin, 2s. 3d.	30 Llan Gan, offer wtd.	5 Van, £20½.
20 Derwent.	25 N. Quebrada, 30s	30 Van Consols, 10s.
20 Devon Con., £2⅝.	20 N. Zea. Kapan., 11s 3d	30 W. Tankerville, 11s.
20 East Van, £4⅛.	100 North Laxey, 3s. 3d.	40 ditto Preference, 22s.
130 Exchequer, 1s. 9d.	50 Pandora.	20 W. Chiverton, £10½.
25 Flagstaff, 22s.	100 Penstruthal, 4s. 3d.	25 W. Wye Valley, £2⅞.
25 Glyn, 17s. 6d.	100 Pestarena, 5s. 6d.	20 Wye Valley, £1¾.
30 Glenroy, 17s.	40 Parys Moun., 9s.	20 Wh. Peevor, £6⅝.
	50 Port Phillip, 11s. 6d.	

*** SHARES SOLD FOR FORWARD DELIVERY (ONE, TWO, OR THREE MONTHS) ON DEPOSIT OF TWENTY PER CENT.

THE D'ERESBY MOUNTAIN DISTRICT.—SPECIAL BUSINESS in—
D'ERESBY MOUNTAIN. | LLANRWST.
D'ERESBY CONSOLS. | PANDORA.
SHARES on SALE at the LOWEST NET PRICES.
JAMES H. CROFTS, 1, FINCH LANE, LONDON.

FOREIGN BONDS—ARGENTINE—EGYPTIAN—RUSSIAN, TURKISH, SPANISH, PERU, &c.
SPECIAL BUSINESS in the above, and Fortnighty Accounts opened on receipt of the usual cover.
JAMES H. CROFTS, 1, FINCH LANE, LONDON.

RAILWAYS—HOME AND FOREIGN.—SPECIAL BUSINESS in the above, and Fortnightly Accounts opened on receipt of the usual cover.
JAMES H CROFTS, 1, FINCH LANE, LONDON.

MISCELLANEOUS AND TRAMWAY SHARES.—SPECIAL BUSINESS in—

MISCELLANEOUS.	CHEMICAL.	TRAMWAYS.
Alhambra Palace.	Lawes.	Argentine.
Fore-street Warehouse.	Langdale.	Bristol.
Halcomb Sack.	Newcastle.	Edinburgh.
Positive Assurance,		Glasgow.
And other Shares.	TELEGRAPHS.	London.
AQUARIUM.	Direct.	North Metropolitan.
Brighton.	Globe.	Tramways Union.
Royal (Westminster).	Telegraph Construction	And others.
Yarmouth.	W. India and Panama.	

BUSINESS TRANSACTED in all MISCELLANEOUS SHARES (of whatever description) having LONDON or COUNTRY MARKET VALUES.
JAMES H. CROFTS, 1, FINCH LANE, LONDON.
Bankers: City Bank, London; South Cornwall Bank, St. Austell.
ESTABLISHED 1842.

MR. W. H. BUMPUS, STOCK AND SHARE BROKER, AND MINING SHARE DEALER,
44, THREADNEEDLE STREET, LONDON, E.C.
ESTABLISHED 1867.

BUSINESS transacted in STOCK EXCHANGE SECURITIES and MISCELLANEOUS SHARES of every description.

RAILWAYS, BANKS, FOREIGN and COLONIAL BONDS, TRAMWAYS, TELEGRAPHS, and all the LEADING INVESTMENTS.

Accounts opened for the Fortnightly Settlement.
A Stock and Share List free on application.

MR. BUMPUS has SPECIAL BUSINESS in the undermentioned:—

50 Aberdaunant, 8s. 6d.	25 Flagstaff, 19s. 6d.	150 New Pacific.
25 Asheton.	30 Frontino, 34s.	50 Port Phillip, 12s.
30 Birdseye Creek, 20s 6d	15 Gorsedd & Merllyn.	25 Pandora, 15s. 6d.
100 Bodidris.	70 Glenroy, 16s. 6d.	100 Penstruthal, 5s. 3d.
50 Blue Tent, £2 12s. 6d.	5 Great Laxey, £19¼.	70 Parys Mount., 9s. 6d.
35 Cambrian.	40 Hingston Downs.	50 Ruby Consolid., 3 s.
100 Cedar Creek, 6s.	25 Hultafall.	15 Roman Grav., £8½.
40 Colorado.	150 I X L	60 Rookhope, 18s. 9d.
75 Derwent, 24s. 6d.	100 Javali, 6s. 3d.	10 Richmond, £9¼.
15 D'Eresby Consols.	50 Kapanga, 12s.	15 South Frances.
50 Don Pedro, 15s. 6d.	30 Last Chance, 23s.	5 So. Condurrow, £11½
5 D'Eresby Mountain.	40 Llanrwst.	50 Tyn-y-Fron.
30 Devon Cons., £2⅞.	15 Leadhills, £3 18s. 9d.	25 Tankerville, £4½.
20 East Van, £4 13s. 9d.	20 Minera	10 Van, £20½.
10 Eberhardt, £6 18s. 9d.	50 Marke Valley.	20 Wh. Grenville, £3⅝.
50 East Caradon.	25 New Quebrada, 32s.	50 West Tankerville.

DEVONPORT AND TIVERTON BREWERY COMPANY.—Mr. BUMPUS can supply a limited number of these shares on advantageous terms to cash purchasers.

*** BLUE TENT, HULTAFALL, and WHEAL GRENVILLE Shares should now be bought. These are all likely to be much higher before long.

SPECIAL BUSINESS, at close prices, in the SHARES of all the principal HOME and FOREIGN MINES.

WILLIAM HENRY BUMPUS, SWORN BROKER.
Offices: 44, Threadneedle Street, London, E.C.
BANKERS—The NATIONAL PROVINCIAL BANK OF ENGLAND, E.C.

MR. E. J. BARTLETT, STOCK AND SHARE DEALER,
No. 30, GREAT ST. HELEN'S, LONDON, E.C.
Capitalists should read the Tenth Edition of "How and When to Invest," post free One Shilling, and a small Pamphlet containing information regarding investments unaffected by war. The latter free by post on application.
SPECIAL BUSINESS in East Lovell, East Van, D'Eresby Mountain, Chapel House Colliery, Great Laxey, Minera, Richmond, Bodidris, and South Condurrow shares.

MESSRS. J. TAYLOR AND CO.,
MINING ENGINEERS AND INSPECTORS,
36, LONDON WALL, LONDON, E.C.,
Have Agents in England, Scotland, Wales, and on the Continent.

FERDINAND R. KIRK, STOCKBROKER,
5, BIRCHIN LANE, E.C.
SPECIAL BUSINESS in—

Aberdaunant.	Eberhardt.	Panuncillo.
Alltami.	East Van.	Royal Aquarium.
Chapel House.	General Credit.	Newport Abercarn.
Credit Company.	Hudson Bay.	Wye Valley.
D'Eresby Mountain.	Port Phillip.	West Wye Valley.
D'Eresby Consols.	Penstruthal.	Whitehaven Iron.

Bankers: London and Westminster, Lothbury.

MESSRS. PETER WATSON AND CO.,
54, OLD BROAD STREET, LONDON, E.C.
BUSINESS in STOCKS and SHARES.
RAILWAYS, BANKS, DIVIDEND LEAD MINES, &c.
BANKERS: The ALLIANCE BANK (Limited).
A CIRCULAR published MONTHLY. Single copy, 6d.; annually, 5s.

MR. ALFRED E. COOKE,
STOCK AND SHARE DEALER,
76, OLD BROAD STREET, LONDON, E.C.
ESTABLISHED 1853.

INVESTORS' GAZETTE, published every FRIDAY EVENING in time for post, sent on receipt of postage stamp.
AN INVALUABLE PUBLICATION.
Edited by—
ALFRED E. COOKE, 76, OLD BROAD STREET, LONDON.

CAUTION.—LISTS of SHARES are advertised in this Journal under the head of "SPECIAL BUSINESS." Although inserted with the obvious intention of seeking applications for shares, clients and the public are warned against being misled, as quotations in most instances preclude the possibility of the shares being supplied. The market quotations are to be found in the Leading Article of this day's Journal.
ALFRED E. COOKE, 76, OLD BROAD STREET, LONDON.

MR. JAMES STOCKER, STOCK AND SHARE BROKER, AND MINING SHARE DEALER,
2, CROWN COURT, THREADNEEDLE STREET, LONDON, E.C.
[Established 1848.]
RAILWAYS, FOREIGN BONDS, BANK, INSURANCE, TRAMWAY, and all MISCELLANEOUS STOCKS and SHARES.
BRITISH AND FOREIGN MINES:—

Aberdaunant, 8s. 6d.	Pandora, 15s.	Chontales, 12s.
Chapel House, £3 3s. 9d	Parys Mountain, 8s. 9d.	Don Pedro, 15s. 6d.
D'Eresby Consols.	Pateley Bridge, £2 12s.	Eberhardt, £6⅞.
Devon Consols, 48s.	Penstruthal, 4s. 6d.	Flagstaff, 20s.
East Van, £4¾.	Roman Grav., £7⅞.	Frontino, 38s. 9d.
Grogwinion, £3¾.	Rookhope, 18s. 6d.	Hultafall, £4.
Glenroy, 17s. 6d.	Tankerville, £4 2s.	Last Chance, 22s. 6d.
Great Laxey, £19.	Van, £20½.	N. Zealand Kap., 10s. 6
Gorsedd, £4¼.	United Mexican, £2¼.	Port Phillip, 11s. 3d.
Leadhills, £3⅞.	Wye Valley, 37s.	Richmond, £9¼.
Llanrwst, 42s. 6d.	West Wye Valley, £2⅞.	Rossa Grande, 2s. 6d.
Mellanear, £3¾.	West Chiverton, £10½	

Carn Brea, D'Eresby Mountain, Devon Consols, Dolcoath, Mellanear, Minera, South Molton Consols, Wheal Crebor, West Godolphin, Wheal Kitty.—Almada, Argentine, Chicago, Hornachos, Javali, Malabar, South Aurora, Tolima.
COLLIERIES.—Alltami, Chapel House, New Sharlston, and Thorp's Gawber.
MISCELLANEOUS.—St. Bride's Welsh Slate, Credit Foncier, Hudson's Bay, Lawes Chemical, Native Guano, Tramway, and Aquarium Shares.
BANKERS: LONDON AND WESTMINSTER.

MR. T. E. W. THOMAS, SHARE BROKER,
3, GREAT WINCHESTER STREET BUILDINGS, E.C.
Established 1857.
The following are the latest prices at which business could be done. Where the difference between the buying and selling price is wide transactions may be effected at an intermediate price:—

	Buyers.	Sellers.		Buyers.	Sellers.
Aberdaunant	7s. 6d.	10s.	New Zealand Kapanga	7s 6d.	10s.
Bodidris	1⅛	1¼	Parys Mountain	2s.	4s.
Chicago	½	¾	North Laxey	7s. 6d.	8s.6d.
Chontales	11s.	12s.	Pateley Bridge	£ 2½	£ 3
D'Eresby Consols	10	12	Penstruthal	4s.	5s.
Denbighshire	¾	1	Plynlimmon	3s.6d.	5s.
Devon Great Consols	1¾	2¼	Richmond (ex div.)	9¼	9½
Don Pedro	12s. 6d.	15s.	Roman Gravels	7¾	8
Eberhardt	7	7½	Rookhope	17s.	19s.
East Caradon	7s.6d.	12s. 6d.	South Caradon	60	65
East Van	4¼	4¾	South Condurrow	10¾	11¼
Exchequer Gold	2s.	4s.	South Frances	1½	2
Flagstaff	18s. 9d.	1 1s 3d	Tankerville	3¾	4¼
Frontino	1¾	2	Tincroft	10	11
Glenroy	15s.	16s.6d.	Van	20	21
Gorsedd and Merllyn	4	4½	West Chiverton	9	11
Grogwinion	3	3¼	West Pateley Bridge	1¾	2
Great Laxey	18	19	West Godolphin	½	1
Hingston	7s.	9s.	West Tankerville	11s.	13s.
Hultafall	3⅞	4⅛	West Tolgus	55	60
Last Chance	17s.6d.	20s.	West Wye Valley	2½	3
Ladywell	16s.	18s.	W. Grenville	3	3½
Leadhills	3¾	4	Wheal Kitty	1½	2
Marke Valley	5s.	10s.	Wye Valley	1⅝	1¾
Mellanear	3½	3¾	Yorke Peninsula	5s.	6s.
New Quebrada	1½	1¾			

Selections, founded on practical mining knowledge, made for the use of investors. An experience of 20 years.—Business on hand in East Van, Roman Gravels, Leadhills, Gorsedd and Merllyn, Bodidris, and other Lead Mines.

WILLIAM B. COBB STOCK AND SHARE DEALER,
62, CORNHILL, LONDON, E.C.
Bankers: The Alliance Bank (Limited).

MESSRS ENDEAN AND CO., 85, GRACECHURCH STREET, LONDON, E.C., STOCK AND SHARE DEALERS.
Established in 1861.
Bankers: Barclay, Bevan, and Co., and London and Westminster Bank, Lothbury.

English and Foreign Stocks and Shares and all other Securities dealt in for cash or account.
Messrs. ENDEAN and Co. have SPECIAL BUSINESS in the undermentioned—

65 Aberdaunant.	60 Pandora, 12s. 6d.	25 Chicago, 15s.
80 Bodidris, 27s. 6d.	50 Parys Mountain, 9s.	40 Chontales, 11s. 6d.
10 Cambrian, £3.	25 Pateley Bridge, £1¾.	25 Don Pedro, 13s. 9d.
20 Chapel House, £3¼.	70 Penstruthal, 3s.	15 Eberhardt, £7.
5 D'Eresby Con. (offers)	30 Roman Gravels, £7¾.	100 Flagstaff, £1.
2 D'Eresby Moun. (off.)	15 Rookhope, 15s.	10 Frontino, £1¾.
20 East Van, £4¼.	5 South Cwmystwith.	10 Hultafall, £3¾.
10 Grogwinion, £3¼.	30 South de Eresby.	30 Javali, 6s. 9d.
10 Great Laxey, £18¾.	5 Tankerville, £3¼.	40 Last Chance, £1.
15 Leadhills, £3¾.	5 Van, £20½.	10 N. Zeald. Kap., 8s 6d.
50 Llanrwst.	10 Wheal Grenville, £3¼	15 Port Phillip, 11s. 9d.
50 North Laxey, 2s. 6d.	10 White Cliff.	20 Richmond, £9¼.

THE LLANRWST MINING DISTRICT.—The LLANRWST MINE is the PRINCIPAL one of this DISTRICT. It is fully equipped with every modern appliance for economical working on the most extensive scale.
The lodes are prolific, and the monthly sales of lead are large and increasing, exceeding that of the whole of the other mines in this district put together—including D'Eresby Mountain, D'Eresby Consols, Clementina, Pandora, and South de Eresby Mountain.
Having our own agents in this district, we are in a position to afford investors the latest and most reliable information respecting the above-named properties.
Apply to ENDEAN and Co., 85, Gracechurch-street, London, E.C.

JOSEPH JOHN PYNE,
STOCK AND SHARE BROKER, AND MINING SHARE DEALER,
6, BISHOPSGATE, LONDON, E.C.
Mr. PYNE having been connected with MINING ENTERPRISE for upwards of FOURTEEN YEARS, and having been a DIRECTOR of MINES in SHROPSHIRE, MONTGOMERYSHIRE, CARDIGANSHIRE, CARNARVONSHIRE, YORKSHIRE, and in VENEZUELA, has had great opportunities of becoming acquainted with this particular branch of industry, and will always be desirous of giving every information in his power to all parties transacting business with him.
ALL DESCRIPTIONS OF SHARES are dealt in, including BRITISH and FOREIGN STOCKS, and RAILWAY SECURITIES.
A DAILY SHARE LIST issued, giving latest quotations up to the close of the market.
AN EXTENDED LIST made up to the first of every month of all securities usually dealt in, giving highest and lowest prices for the month, the current dividends, and when payable, with amount of interest calculated at the present market price. Will be forwarded when desired.
MR. PYNE DOES NOT ISSUE ANY CIRCULAR.
BANKERS—THE ALLIANCE BANK (LIMITED).

MR. CHARLES THOMAS,
MINING AGENT, STOCK AND SHARE DEALER,
3, GREAT ST. HELEN'S, LONDON, E.C.

MR. ALFRED THOMAS,
MINING AGENT, AND STOCK AND SHARE DEALER.
10, COLEMAN STREET, LONDON, E.C.

"INVESTMENTS AND SPECULATIONS" for 1878, Price Sixpence.

TO CAPITALISTS, SHAREHOLDERS, INVESTORS.
SAFE DIVIDEND INVESTMENTS.
DIVIDENDS 4 TO 6 AND 10 PER CENT. PER ANNUM.
Read SHARP'S INVESTMENT CIRCULAR. Post free.
[It is a "Safe Guide," giving Reliable Information upon all Stocks and Shares.
Market prices; Dividends upon outlay, and when payable; Reports, &c., &c.
SPECIAL BUSINESS IN THE FOLLOWING MINE SHARES:—

100 Aberdaunant.	30 [illegible] xey.	80 South Cwmystwith.
180 Bodidris.	100 Grogwinion.	100 Saint Harmon.
100 Cambrian.	115 Hultafall.	50 Tankerville.
30 D'Eresby Consols.	110 Ladywell.	20 Tincroft.
3 D'Eresby Mountain.	100 Ditto Preference.	150 Tolgus Consols.
5 Dolcoath.	78 Leadhills.	20 Van.
100 East Chiverton.	100 Llanwrst.	37 West Chiverton.
20 East Pool.	163 Pandora.	200 West Pateley Bridge.
50 East Van.	100 Pateley Bridge.	120 West Tankerville.
175 Glenroy.	60 Red Rock.	100 Ditto Preference.
100 Gorsedd and Merllyn.	50 Roman Gravels.	50 West Wye Valley.
90 Great Holway.	155 Rookhope.	100 Wye Valley.

Intending Investors should apply to us for Shares in the above Mines.
THE LOWEST PRICES WILL BE FORWARDED UPON APPLICATION, OR OFFERS CAN BE MADE WHICH MAY LEAD TO BUSINESS.
Shareholders wishing to sell Shares in above should forward us their instructions.
GOULD SHARP AND CO., STOCK AND SHARE BROKERS,
42, POULTRY, LONDON, E.C.—ESTABLISHED 1852.
Bankers: London and Westminster, Lothbury, London, E.C.

MR. EDWARD ASHMEAD, 62, CORNHILL, LONDON,
LONDON MINE AGENT, ACCOUNTANT, AND AUDITOR.

MR. JOHN B. REYNOLDS, STOCK AND SHARE DEALER,
70 AND 71, BISHOPSGATE STREET WITHIN, LONDON, E.C.
Established Twenty Years.
Bankers: London—City Bank.
Cornwall—Messrs. Tweedy, Williams, and Co., Redruth.

MESSRS. EKINS AND CO., STOCK AND SHARE DEALERS,
14, QUEEN VICTORIA STREET, MANSION HOUSE, LONDON.
Bankers: Metropolitan.
Special dealings in South de Eresby Mountain Shares.

WILLIAM GABBOTT, STOCK AND SHARE DEALER,
8, DRAPER'S GARDENS, THROGMORTON STREET, LONDON, E.C.

IMPORTANT TO INVESTORS.
GOLD AND SILVER MINES must command great attention. Prices are sure to advance. Immediate buyers may expect large profits. A List of Gold and Silver Mines for the guidance of intending investors can be had free on application.

MR. W. MARLBOROUGH, STOCK AND SHARE DEALER,
29, BISHOPSGATE STREET, LONDON, E.C. (Established 21 Years),
can sell the following SHARES, at prices annexed:—

100 Aberdaunant	10 Grogwinion, £3 10s.	25 Rookhope, 18s. 3d.
50 Chontales, 11s. 3d.	20 Glenroy, 16s. 6d.	10 Richmond, £9 10s.
15 Cambrian, £3.	30 Hultafall £4 7s. 6d.	15 Roman Grav., £7⅞
20 Chapel House, £3 5s	15 Ladywell, 18s. 3d.	100 St. Bride Slate, £1¾.
60 Don Pedro, 16s.	20 Last Chance. £1 1s. 3d	20 Tankerville, £4 1s 3d
30 Devon Con., £2 8s 9	20 Leadhills, £4.	25 Tecoma, 4s.
40 Denbighshire, £⅞.	40 N. Quebrada, £1 13s. 9	50 Tyn-y-Fron
10 D'Eresby Con., £11½.	25 Newport Aber., £3 5s.	4 Van, £20. 12s. 6d.
15 East Van, £4 15s.	5 Minera, £10 15s.	25 Wye Valley, £1 9s 3d
10 Eberhardt, £7 2s. 9d.	25 Pandora, 17s. 6d.	20 W. Wye Val., £2 16 3
30 Frontino, £2	100 Pestarena, 5s.	25 W. Tankerv., 12s. 6d.
50 Flagstaff, 21s. 3d.	25 Pateley Bridge, £2 15	75 Yorke Penin., 5s. 3d.
10 Great Laxey, £18½.	75 Parys Mount., 8s 9d	5 West Chiverton, £10¾
20 Gorsedd and Merllyn, £4 12s. 6d.	50 Penstruthal, 4s. 9d.	20 Wheal Newton, £5.
	40 Port Phillip, 11s. 6d.	

Shares bought and sold at net prices. Telegrams promptly attended to.
Specially Recommended for an early rise in price:—Gorsedd and Merllyn, Bodidris, Tyn-y-Fron, Hultafall, and Pandora.
EAST LOVELL.—FOR SALE, to close an account, FIFTY SHARES. Offer wanted.

MESSRS. W. J. TALLENTIRE AND CO.,
STOCK BROKERS, AND DEALERS IN BANK, TRAMWAY, MINING, AND MISCELLANEOUS SHARES,
20, CHANGE ALLEY, CORNHILL, LONDON, E.C.,
Transact business in Stock Exchange Securities and Mining Shares of every description, either for immediate cash or the usual bi-monthly settlements, and also afford advice personally or by letter to executors, trustees, capitalists, and investors of every class in the selection of Securities for safe and profitable investment, their experience of the markets, extending over a period of more than 17 years together with special facilities for acquiring information, enabling them to act beneficially for clients.
They have established Corresponding Agencies in all the principal towns of the United Kingdom, and are prepared to deal in the various local Stocks and Shares at close prices. Orders per post or telegraph receive prompt attention.
INVESTORS SHOULD APPLY for a copy of Messrs. W. J. TALLENTIRE and CO.'s Circular, SENT POST FREE. It contains valuable information on Foreign Stock, Railway, Mining, and General Investments.

TO INTENDING INVESTORS AND SHAREHOLDERS.

MESSRS. W. J. TALLENTIRE AND CO., 20, CHANGE ALLEY, CORNHILL, LONDON, E.C., have the following MINING SHARES FOR SALE.
OFFERS CAN BE MADE, OR PRICES WILL BE FORWARDED:—

100	BODIDRIS	LEAD.	100	MEDLYN MOOR	TIN.
15	EAST CRAVEN MOOR	do	50	PARYS MOUNTAIN	COPPER.
15	EAST VAN	do	100	ROOKHOPE	LEAD.
100	GLENROY	do	15	ROMAN GRAVELS	do
5	GREAT HOLWAY	do	15	ST. HARMON	do
20	LLANRWST	do	20	WEST CRAVEN MOOR	do
20	HULTAFALL	do	20	WEST CHIVERTON	do

N.B.—Some of the above will be sold on specially favourable terms to cash purchasers.

GROGWINION LEAD MINE (LIMITED).

MESSRS. H. HALFORD AND CO., STOCK AND SHARE BROKERS, of EXCHANGE CHAMBERS, CHANGE ALLEY, LOMBARD STREET, strongly recommend the above mine as one of the best and safest mining investments. Dividends are paid half-yearly. The mine has lately very much improved in the deepest workings, and the sales for the present month are 150 tons of lead.
WYE VALLEY, WEST WYE VALLEY, RED ROCK, AND SOUTH CWMYSTWITH LEAD MINES.
These mines have all recently improved very much, and large sales of lead are being made. Shares in all of them should be secured at once.
CARON LEAD MINE (LIMITED).
Subscribed Capital £16,000 (all subscribed in a few days).
This company is likely to prove one of the greatest successes of modern times. The mine is now in full work, good Reserves of Lead laid open, and sales will commence as soon as the new dressing machinery is completed. The shares are, we consider, likely to greatly increase in value in a very short time.

FOR SALE.
100 Aberdaunant.
20 Gorsedd and Merllyn.
100 Hultafall.
20 Hornachos.
20 East Van.
20 Cargoll.

WANTED TO BUY.
5 D'Eresby Mountain.
100 Glyn.
200 Don Pedro North del Rey.
100 Hornachos.
5 Lisburne.
200 Llanrwst.

Address, H. WILKINS, 3, Heybourne Villas, Tottenham, N.E.

Lectures on Practical Mining in Germany.

CLAUSTHAL MINING SCHOOL NOTES—No. LXXIII.*

BY J. CLARK JEFFERSON, A.R.S.M., WH. SC.,
Certificated Mining Engineer.
(Formerly Student at the Royal Bergakademie, Clausthal).
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SECTION V.

The ordinary door-set timbering often requires supports. In the case of wide lodes, or in the jig-brows of stratified deposits, the cap piece is of comparatively greater length than in the levels in lodes of ordinary width. The extra support which the cap thus requires leads to the principal modification of door-set timbering in mines of stratified deposits. The simplest of these is the Polish door-set timbering, which consists of a single cap piece, let well into notches in the sides of the level, and supported by a single leg placed under the centre of the cap. Such a description of timbering is intended essentially for the support of the roof, irrespective of the character of the sides. Often the ordinary door-set, with two leg pieces, and covered on the outside with covering wood, is modified by placing a third leg beneath the centre of the cap piece. Sometimes longitudinal bearings are placed in the direction of the level, beneath the centre of the cap piece, and supported at intervals by legs placed in the centre line of the level. The joints between the legs and the caps are often strengthened by placing round timber, or bars, in the direction of the level in the upper corners of the door set; the bars are supported by vertical props, and kept apart by means of short cross bars. The effective distance between the ends or supports of the cap is often shortened, and the cap, therefore, strengthened, by inserting inclined struts notched into the sides of the legs and the underside of the cap. To steady and strengthen the door-sets from movement in the direction of the level, they are sometimes stemmed against each other by horizontal bars, or inclined struts, from the upper ends of the legs against the floor.

(*d.*) FLOOR TIMBERING.—The simplest method of timbering the floor, when it is of such a nature that the feet of the stempels will be likely to sink into it under any considerable pressure, is to lay flat boards or planks beneath the foot of the stempel, so as in this manner to obtain a larger area for support. In some cases a firmer footing is obtained by driving wooden piles into the ground, and then forming a foothold for the stempel of the door-set in these. These precautions will only be satisfactory where the pressure is not very considerable, and where the ground is not very tender or yielding; under opposite conditions their support will be insufficient, and at most only temporary.

The most usual method where the ground is of a still more yielding character is to place sills crossways beneath the legs of a door-set, and beneath and parallel with the cap piece. Such cross ground sills are variously called "Grundsohlen," "Grundschwellen," and "Grundladen." The legs, or staunchions, of the door-set can be connected with the ground sill in any of the ways that we have described, as well for joining the cap piece with the leg piece. The best method is to notch the sill, in doing which care should be taken to cut the end of the leg and the surface on which it rests in such a manner that the perpendicular (at the foot of the leg) to this surface falls within the axis of the leg. An excessive pressure will in this case then only tend to force the foot of the leg tighter and deeper into the notch, whereas if the above perpendicular was outside the axis of the leg piece an excessive pressure would tend to force or slide the foot out of the notch. When the legs are placed vertical the notch should be horizontal. The ground sills are generally made of half round wood, with the flat side placed downward. Occasionally, in order to obtain a still greater surface for the support of the door-set, a thick broad plank of wood is inserted beneath the ground sill, and on which the latter rests. Such a kind of support will answer well where the ground, although yielding, is pretty uniform, and where the pressure likewise is uniform. If this is not the case an excess of pressure on or a more yielding nature of the ground beneath any particular door-set, or adjoining door-sets, would lead to their sinking beneath the general level of the drift, and endanger the safety of the drift at this point, besides the inconvenience attaching to such an irregularity. In such a case It will be found most advantageous to place the ground sills not across but in the direction of the length of the level, since with such an arrangement several door-sets are supported by a single pair of ground sills. Such sills are technically termed "Langschwellen," longitudinal sills, and correspond to the above mentioned longitudinal bearers beneath the caps, and serve to distribute any irregularities of pressure on the door-sets uniformly over a considerable area of the ground, and also to compensate for any inequalities in the resisting nature of the ground. In many cases both the cross and longitudinal ground sills are used combined, though such an arrangement is but little stronger than that with longitudinal sills alone. It may happen that the support is so yielding, or that it is intended afterwards to remove the timbering of the level, except the floor, which is required to be left so as to support the superincumbent attle, that in this case the use of ordinary ground sills, as just described, does not guarantee sufficient support. In such a case the sills, or sleepers, are notched in the sides or walls of the lode like stempels, on which the door-sets are then placed. As the fixing of the floor stempels occupies considerable time when properly and carefully carried out, and since it is not necessary in order to support the weight that there should be as many stempels as door-sets, it is more usual to place longitudinal ground sills close to the sides of the lode, and resting upon the stempels, the door-sets resting upon the longitudinal ground sills. A pair of stempels then supports several door-sets. Where the lode lies at but a comparatively slight inclination a half door-set may then be found sufficient, or the leg piece on the hanging side may be made shorter, and footed into the hanging wall, provided this is sufficiently firm.

It may occur that the character of the ground is such that unless the sills or sleepers are placed close together the floor may swell up between them. In such a case, if the ground sills are placed close together it may cause an unnecessary expenditure of timber and labour, the floor being much stronger than necessity requires. Such a floor is usually timbered by placing covering wood or planks of a suitable thickness beneath the cross floor sills, or stempels, close together, in a manner somewhat analogous to that of covering the roof. Where the upward pressure is considerable, and the divergence of the legs of the door-set at the bottom considerable, it will often be found necessary to support the cross stempels, or strut them down. This is often accomplished by placing uprights vertically beneath the corners where the cap piece and legs meet, and in order to distribute this resistance over several cross floor sills the uprights may be footed on longitudinal bearers resting upon the floor sills.

A very common method in salt mines for timbering the floor is the formation of an inverted arch of wood. The centre line of wooden blocks which form the key of the arch are made deeper and thicker than the others, since it is usual to hollow out a channel in it for carrying off the water. Such an arrangement can only be advisable in salt mines and the like, where the water which continually passes over the woodwork is saline, or of such a nature as to tend to preserve the wood.

Another mode of supporting the floor, where it is liable to swell out, is that of using rafter timbering in an inverted form, analogous to that we have previously described for supporting the roof, only in this case the rafters are generally made to abut against each other, without the insertion of a longitudinal plank. The under side of these will be covered by planking, and upon the upper ends of the inverted rafters the legs of the door-set are footed. Usually in such a case the legs of a door-set will diverge from each other upwards, and the cap is in such a case somewhat longer than usual.

(*e*). COMBINED FLOOR AND OTHER TIMBERING.—In our description of the various modes of timbering the floor of levels we have in some cases included that in which this is combined more or less with side timbering. We now proceed to consider those cases in which, either from the character of the ground or other accessory causes, such as great width of a lode, it is found necessary or advisable to timber more or less all four sides of the level.

In the wider lodes of the Harz mines a kind of timbering called "Stempelzug" was formerly much in vogue. This consisted of a stempel inserted in a notch in the hanging wall, and driven tight down against a wedge or head piece on the lying wall. Resting on the floor stempels, and close against the lying wall, longitudinal bars were placed, and resting on these, and notched into the lying walls, were the lower ends of the roof stempels; these were inclined at an angle of about 40°, whilst the floor stempels were fixed in position nearly horizontal. In the case of a loose or defective hanging wall the upper ends of the roof stempels were notched into a wall piece. The roof stempels were not necessarily placed vertically over the floor stempels, the former, however, were covered over with planking, or covering wood, and upon these attle packing piled in the usual manner.

In some of the Cornish mines, where the ground is of a somewhat quick character, so that it is necessary to timber the four sides, the so called "coffres" are used. These consist of a rectangular frame composed of four planks 2 to 2½ in. thick, and 12 to 16 in. broad, of which the two longer ones overlap the ends of the shorter pair. In the corner four square blocks of wood are placed, bolted or fastened with long screws to the longer planks, and these prevent the shorter pieces from being pushed inwards, whilst the two shorter planks keep the longer ones apart. The separate pieces are easily carried to the place where it is intended to fix them, and then placed in position, only so much ground being removed at a time as is necessary for their insertion.

In some of the more difficult portions of the Comstock Lode a coffin-shaped timbering is used, which is lined all round the outside with 3-in. lagging. This timbering is nothing more than two ordinary door-sets placed together, the lower one being inverted, the legs of which are considerably longer than those of the upper door-set, the legs of the upper door-set resting upon those of the lower door-set.

As a development of this latter kind of timbering may be considered one description of the so called "Stockelzimmerung," that consists of short pieces of round wood cut at the ends in such a manner that when joined together they form an elliptical frame. The level is timbered by placing a number of such frames close against each other. This kind of timbering must be considered as somewhat insecure, and its great cost makes the use of brickwork or masonry decidedly preferable. Where the frame is composed of sawn wood instead of round wood, so that the separate blocks bear against the adjoining ones on four faces, the stability of this kind of timber will be considerably increased, but more than counterbalanced by the expense of cutting and sawing the wood to proper shape. The best method of forming this elliptical timbering is to form the separate blocks or bricks of sawn wood in pieces about 6 ft. in length and 12 to 15 in. deep: and in order to secure it more effectually, the cross vertical ends where the separate blocks abut against each other are made to break joint, as in brickwork. Sometimes this same arrangement is followed with the difference that the length is only from 18 in. to 3 ft.; this, whilst possessing no advantage, is much more expensive, and should only be resorted to where the ground will not stand open for such a length a sufficient time for the insertion of the separate blocks of greater length. With such timbering the chief point requiring attention is the cutting of the sides and ends of the separate blocks, so that when joined in order (for which reason they must be numbered) they form an elliptical cylinder. The preparing, sawing, &c., of the blocks will, of course, be effected at the surface. Such timbering can only be recommended for salt or other mines, where the timbering is likely to last a considerable time without requiring renewal.

As appendix to this description of the various methods followed in timbering levels, we shall describe a few special examples of timbering, as called for by special circumstances.

At the Botallack Mine, in Cornwall, where the lode is worked beneath the sea, and upwards of 22 ft. in width, the roof of the level is formed by two strong stempels or bearers of Norway timber—one 20 in. thick, and the other 16 in. thick, laid one over the other, both being notched in the hanging wall, but driven tight up against a long wooden wall plate laid close against the hanging side. The roof is well lagged on the top of these bearers, and attle rests upon them to a height of 80 to 100 ft. About 12 ft. below the roof strong floor stempels made from timber 18 in. square are notched in the lying wall, but driven up against the wall-plate on the hanging side. A pair of stempels of 10-in. round wood are driven between the foot and roof stempels, the row of stempels nearest the hanging-wall are backed with covering wood, the space thus left next the hanging-wall is used as a tramroad after the floor has been levelled for the purpose. The space next to the lying wall, occupying the greater part of the width of the lode, is filled with attle.

* Being Notes on a Course of Lectures on Mining, delivered by Herr Bergrath, Dr. VON GRODDECK, Director of the Royal Bergakademie, Clausthal, The Harz, North Germany.

STEAM-BOILERS FOR VERY HIGH PRESSURES.

It was stated by Mr. Gray, in a paper read before the Institution of Naval Architects, that formerly 40 lbs. absolute pressure yielded 6-horse power for a certain quantity of coal; whilst at present with 80 lbs. absolute pressure for the same quantity of coal the result was 8-horse power whence he inferred that the horse power increased in arithmetical progreession, and the pressure in geometrical progression, and that it would require 1280 lbs. on the square inch to double the present efficiency, even if that pressure could be carried without additional drawback. Referring to this, Mr. J. F. Flannery read before the Institution of Civil Engineers, on May 7, a paper on the Construction of Steam-Boilers adapted for very high pressures, in which he remarked that there was at present no proof that practical difficulties would reduce to so serious an extent the theoretical gain incidental to increased pressure and expansion. Assuming, however, that by increasing the present boiler pressure, and adopting suitable expansion, it would be possible to increase the economy only 20 per cent. The advantage at sea would be most important. No doubt could be thrown on the statement that boilers of the existing types, especially marine boilers, would not carry much higher pressures than they were now subjected to, even though the usual factor of safety might with propriety be reduced; the limited space allowable on board ship for boiler room, and the necessily of occupying that space in the most economical manner, left scarcely any choice as to the external size of each separate boiler, and the size being thus dictated, the pressure to be carried was necessarily limited by the possible thickness of the iron of the outer shell, and the means of rivetting it.

By an extension of the heating surface in relation to the grate surface, so that the temperature of the escaping gases might be reduced to a minimum, the evaporative economy of all boilers might be made nearly the same, but a boiler having favourable disposition of the surfaces would more readily be adapted to such reduction of the temperature of the escaping gases, and the maximum efficiency could accordingly be obtained in such a boiler with the least extension of the heating surface, and, therefore, with the least size and weight. On this ground alone it was believed that important economy might be obtained by the use of the water tubes. Another important advantage incidental to the water tube or sectional boiler, if well designed, was its facility for expansion and contraction under varying temperatures without undue strain upon the joints. It was well known that one of the greatest evils of the present cylindrical marine boiler was the wear and tear, and ultimate leakage of the seams of the shell, from its unequal expansion. There seemed little hope of removing this defect from the cylindrical boiler, but the sectional boiler was in almost all cases entirely free from it. From the discussion which took place it appeared then that the employment of tubes in horizontal or nearly horizontal positions would not give good results; but the use of tubes of properly proportioned diameter and length, in a position sufficiently inclined to allow the steam bubbles to ascend along the tube by gravity, and having afterwards an uninterrupted flow to the steam-chest, would be safe and efficient. Under all circumstances a boiler should possess separate upcasts for the newly generated steam, and separate downcasts for the water to take its place. A point of equal importance was the free access to all parts of the boiler for the purpose of cleaning. From the nature of the case the tubulous boiler was difficult to arrange in this respect, and some examples after working well for a time had failed from the large deposit of scale, for which no ready means of removal were provided.

SPONTANEOUS COMBUSTION.*

BY MR. JOSEPH WILLIAMS,
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The subject of spontaneous combustion is one of great interest to many engaged in several of the great industries of this country, and, perhaps, to none are the disastrous results produced by it of more importance than to those engaged in mining operations.

Spontaneous combustion is liable to occur wherever substances having chemical affinity or attraction for each other are brought into intimate contact. Two causes have been assigned for spontaneous combustion in coal mines—one the presence of iron pyrites, and the other the chemical action of oxygen upon finely divided coal. The properties of two substances—carbon and oxygen—will have to be considered. Atmospheric oxygen is constantly active, changing organic and inorganic bodies; in some instances building up in others all powerful in the decomposition or destruction of the original form of the same. Matter is indestructible; and although it may disappear, it has only changed from the solid to the gaseous state, or into substances less complex, and of a more stable nature. If a lump of coal is burnt it disappears, uniting with the oxygen of the air, and the products are carbonic acid, water, sulphurous acid, and some other bodies which are compounds, consisting of fewer elements but much more difficult to decompose than coal. Oxygen plays a very important part in spontaneous combustion in charcoal mills, mines, and wherever carbonaceous substances under favourable circumstances are exposed to its action. Chemical action is the result of certain laws, and unless those laws are fulfilled it never happens—among like bodies it never occurs. If two pieces of iron are brought together no action will result. It will be the same if two pieces of copper are brought into contact. If bodies possessing unlike properties are brought together then chemical affinity follows under certain conditions, and the more unlike the bodies are in properties the greater is their attraction for each other. In some instances the most powerful forces are required, and will only with difficulty cause some unlike bodies to chemically unite. The two elements—chlorine and antimony—the one a non-metal and the other a metal, have a great affinity for each other, and when the metal in a finely divided state is brought into contact with the gas it instantly takes fire from the rapid chemical combination of the elements (experiment), and forms a chloride of antimony. Here is an example of spontaneous combustion, and we may define the term combustion as intense chemical action with the evolution of heat and light, and when this phenomenon happens of itself it is termed spontaneous combustion. Heat invariably accompanies chemical action—if sulphuric acid and water are mixed the chemical union produces (experiment) heat, but not light.

Potassic chlorate and sulphuric acid mixed produce chemical action, and a decomposition of one of the compounds formed results in a series of explosions (experiment). If another body be present which will unite with one of the liberated bodies violent spontaneous combustion may occur by adding turpentine, which is a compound of carbon and hydrogen, to the potassic chlorate, and then sulphuric acid, immediately the chlorine is liberated it unites with the hydrogen of the turpentine, forming hydrochloric acid, and setting the carbon free (experiment). It is necessary that bodies be brought into intimate contact before chemical combination can take place. Here is a mixture of sugar and chlorate of potash, and I have this rod dipped in oil of vitriol; it is brought near, but no action happens; but directly it is touched with the rod the whole mass bursts into flame (experiment).

Take another example, two substances, tartaric acid and carbonate of soda, both are reduced to a fine powder and intimately mixed, but no action is observed, something is required to bring them into closer contact; this can be accomplished by the addition of a little water, and instantly chemical action commences (experiment). Heat is a means of bringing bodies into closer contact and causing them to chemically combine. A mixture of copper and sulphur forms a sulphide of copper (experiment.) Carbon has a chemical affinity for oxygen; when heated to redness it readily combines with oxygen (experiment), and forms carbonic acid, which can be shown by adding a little limewater to the gas, resulting from the union of the carbon and oxygen, when a white substance, which is chalk, is observed (experiment). Carbon is a powerful absorber of gases. A piece of carbon prepared from the cocoa-nut shell recently ignited and quenched under mercury will absorb at 0°C. and 760 m.m. pressure, 171·7 times its own volume of ammonia gas, and 17·9 volumes of oxygen gas under similar circumstances (experiment). Carbon exposed to the air absorbs within its pores the atmosperic gases. If after a time the gases are expelled it is found that in its pores are not nitrogen and oxygen, but nitrogen and carbonic acid, the nitrogen has not changed, but the oxygen has combined with the carbon, and formed imperceptibly carbonic acid; now slow chemical union has been proceeding, and heat, though not apparent, has been given off. This union when absorption happens can be illustrated by the instantaneous lamp. The gas hydrogen plays upon spongy platinum, and is absorbed in its pores with the oxygen of the air, and they are brought into intimate contact, chemical union is set up, and the temperature is raised sufficiently to produce spontaneous combustion of the hydrogen gas.

Pyropheric iron when coming in contact with oxygen of the atmosphere will spontaneously ignite; this in all probability arises from the rapid absorption of oxygen gas within the pores, and its chemical union with the hydrogen present from its preparation. A lump of phosphorus will slowly unite with the oxygen of the air if exposed, but if reduced to a finely divided state it instantly bursts into flame when exposed to the air by dissolving phosphorus in the volatile liquid carbon-disulphide; this can be easily accomplished (experiment). From the experiments observed we may arrive at the conclusion as to the cause of spontaneous combustion: Whenever bodies having chemical affinity for each other are brought into intimate and absolute contact chemical union occurs, and if the quantities are sufficient the heat which results from the chemical action will continue to increase till spontaneous combustion results. This chemical action is seen in the rubbish heaps from some of our manufactories, the iron turnings put aside by the turner when it becomes moist commences to oxidise. Tow saturated with oil, which is a compound of carbon, hydrogen, and oxygen, if allowed to remain in a heap will ultimately produce chemical action of sufficient intensity to result in spontaneous combustion. Ground charcoal when moistened will spontaneously ignite. The fine dust of flour-mills with the heat produced by the friction of the machinery is liable to spontaneous combustion.

In coal winning quantities of the material are reduced to finely divided powder by the pick and by the pressure of the superincumbent mass upon the pillars left as supports, and this coal in the minutely divided state, like carbon—for coal is essentially carbon, as it contains from 50 to 90 per cent. of that element—is capable of largely absorbing oxygen from the air. Atmospheric moisture, together with the water of the mine, bring the particles of coal and oxygen into intimate contact (when what is termed sweating happens) chemical action is set up, the action becomes more and more intense, for heat, as you have observed, favours chemical action, and at last spontaneous combustion commences. Some assert that

* A paper read before the South Staffordshire and East Worcestershire Institute of Mining Engineers.

pyrites is the cause of spontaneous combustion, but considering the properties of carbon, it is attributable to the power which it possesses for absorbing gases, and the chemical affinity which carbon and oxygen have for each other. If charcoal in minute division which contains no pyrites is made perfectly dry, and allowed after it has been exposed some time to the air to become moist, it will spontaneously ignite; this is sufficient to convince that it is not the pyrites. All that can be said in favour of the pyrites is that there is a chemical action produced by their decomposition, and heat results, but the heat is so insignicant from the quantity of pyrites present that it may slightly assist, but would never produce heat enough to cause spontaneous combustion. The best method to prevent spontaneous combustion is to keep the temperature of the mine as low as possible by an abundant supply of air, as elevation of temperature assists chemical action, and as far as possible to prevent the accumulation of finely divided coal.

ON THE SPIRORBIS LIMESTONE,*

CONTAINING SPIRORBIS CARBONARIUS FOUND IN SINKING THE TRIAL SHAFT AT SANDWELL PARK COLLIERY.

BY MESSRS. DANIEL JONES, F.G.S., AND HENRY JOHNSON, SEN., MINING ENGINEER.

The discovery of Spirorbis Limestone in the Sandwell Park sinking, and more recently in Hamstead shaft, will have brought the subject of this paper before the minds of many persons connected with mining operations in South Staffordshire for the first time, since this remarkable stratum has been hitherto unknown in that coal field. We have, therefore, thought it would be acceptable to the South Staffordshire Institute of Mining Engineers if we laid before them some remarks upon the matter.

Spirorbis Limestone occurs only in the upper coal measures, and is so named from the prevailing fossil found in it, called Spirorbis Carbonarius, a microscopic serpula, of which an enlarged drawing is exhibited upon the walls, magnified 1000 times. Sir R. Murchison was the first to call attention to this remarkable stratum, and described it in his Silurian System, p. 81, published in 1838, wherein he speaks of it "as a discovery new to geologists." He named the fossil "Microconchus Carbonarius," and found so great a resemblance between this and certain lacustrine limestones in France and Germany that he called it a "Freshwater Limestone," and by this name it continues to be called in some districts, though erroneously, as this fossil is now referred by naturalists to the marine or estuary genus "Spirorbis." And this seems reasonable from the observations of Mr. E. W. Binney, who has found that some of the coal measure sandstones in the neighbourhood of Manchester exhibit on their surfaces the clearest indications of having been shore deposits, certain tracks being marked on them of animals which must have crawled at ebb tides. He states, further, that the shells of this spirorbis occur throughout the whole of the thick series of the Lancashire coal field, and thus indicate the long continued action of marine conditions.—(In a valuable paper "On some Trails and Tracks found in the Carboniferous Strata, with remarks on Microconchus Carbonarius." By E. W. Binney. Transactions of the Literary and Philosophical Society of Manchester, vol. x, 1851-2.)

Mr. Roberts, the author of an interesting little book, entitled the Rocks of Worcestershire, also states that the shales as well as the limestone found in the Forest of Wyre coal field contain large numbers of these shells. It is associated with a small crustacean "Leperditia inflata," and a bivalve having the form of a "cyclas" or "cyrena." These are figured in the Silurian System, p. 84. The general character of the genus Spirorbis is thus given by Sedgwick and McCoy, "tube discoidally coiled, of few whorls, and attached on one side of its whole length." The most important development of the limestone named from this fossil occurs at Ardwick, in the Manchester coal field, where we have the following section:—

	ft.	in.
Drift	37	6
Red clay	4	0
First limestone band	1	2
Coal measures	10	8
Second limestone band	1	4
Coal measures	11	6
Third limestone band	1	4
Coal measures	13	6
Fourth limestone band	0	10
Coal measures	36	0
Fifth limestone band	1	0
Coal measures	24	0
Sixth limestone band	2	0
Coal measures	99	0
Seventh limestone band	4	0
Coal measures	15	0
Eighth limestone band	3	0
Coal measures	4	0
Ninth limestone band	1	0
Coal measures	15	0
Tenth limestone band	1	6
Coal measures	45	0
Coal and black band ironstone (Bassay Mine)	1	6
Coal measures	6	0
Eleventh main limestone band	9	0
Red and variegated shales and clays, with bands of ferruginous limestone	60	0
Coal	0	6
Floor	6	0
Large calcareous nodules	0	10
Coal measures	96	0
Twelfth limestone and red ironstone	2	0

In the North Staffordshire coal field we have two if not three beds of this limestone, with coal seams lying in between. In Shropshire it occurs over the whole of the Shrewsbury coal field, ranging from Coedway at the foot of the Breidden Hills, to Uffington at the foot of Hanghmond Hill. The following is an abstract of the Pontesford section, from which it will be seen how the limestone lies, and its relation to the coal seams:—

	ft.	in.
From the surface to the half-yard coal	90	0
Half-yard	1	6
Coal measures	57	0
S. limestone in two beds	7	0
Coal measures	42	0
Yard coal	3	0
Coal measures	54	0
Thin coal, or bottom seam	1	4

He describes the limestone as being 7 ft. thick, divided into two beds—the uppermost a compact cream-coloured rock, slightly argillaceous, with a splinty concoidal fracture and dull lustre; the lower, though essentially the same limestone, is cellular, the cavities being filled with crystallised carbonate of lime and black bitumen (both viscous and compact), and veins of calcareous spar and sulphuret of iron are also disseminated through it. The limestone was worked for some years, and profitably at Lebotswood, a small outlying coal field in the same district.

It has been discovered by Mr. D. C. Davis, of Oswestry, in the coal measures extending on the banks of the Dee, and in the new sinking at Ifton Rhyn, which he has fully described in a paper read before the Geological Society of London, and published in their Quarterly Journal for February, 1877, p. 10. He made the discovery in 1873, and it seems to form a connecting link with the North Staffordshire and Manchester coal fields. In the Coalbrookdale coal field it has been known for many years past, and as far as Farley, near Bridgnorth, was spoken of by Mr. Prestwich.

To the south of Bridgnorth we enter upon the Forest of Wyre coal field. In 1866 Mr. E. W. Binney, in a paper read before the Manchester Geological Society, spoke of this limestone as occurring at Gebhouse and Prizeley points, in the southern portion of the coal field.

The intermediate ground ranging from Erdington to Arley Rings was examined by Mr. Daniel Jones, one of the authors of this paper. The result of his investigations, so far as the Spirorbis Limestone is concerned, was communicated to the Manchester Geological Society in a paper on the subject read in December, 1870. He found it in 15 or 16 different places, and his suite of specimens, duly labelled, which was deposited with the officers of the Severn Valley Field Club at the Institute, Coalbrookdale, with a copy of the paper in question, is now courteously lent by them on this occasion for your inspection. Thus we are brought to Arley Rings, situate to the south of Bewdley. Hence we pass over a range of trias rocks, and reach the South Staffordshire coal field. Mr. Jones in his paper has the following remark:—"Although the upper coal measures are pretty well represented in the southern portion of the South Staffordshire coal field, I have not yet heard of the Spirorbis Limestone having been there met with. It is very probable that it does occur, though in such insignificant proportions as to have escaped the attention of the sinkers. Indeed, it is extremely probable that these upper coal measures and limestone at least extend beneath the Permian and Trias between the Warwickshire coal field and the Forest of Wyre, and I have but little doubt that the limestone of Warwickshire is but the continuation of the Forest of Wyre band." And Mr. Charles Ketley, speaking of Sandwell in his paper on the Red Rocks near Birmingham, in the Geological Magazine for May, 1875, asks—"Is it not possible that the Spirorbis Limestone may yet be found over all to prove the relation between the South Staffordshire and the Warwickshire coal fields on the one hand, and the Wyre Forest coal field on the other?" We now pass the coal field to Sandwell Park, where it was passed through in reaching the Thick coal. The section may be grouped as follows:—

	Yards	ft.	in.	
Drift	16	0	0	
Red ground	64	0	0	
Purple marls	43	0	0	
Spirorbis limestone	0	0	10	at 123 yards.
Purple marls and rocks	77	0	0	
Thin coal	0	0	9	at 200 yards.
Blue shales and white sandstones	87	0	0	
Purple, variegated marl, and conglomerate	62	0	0	
Binds	35	0	0	
Brooch coal	0	3	0	
Binds	35	0	0	
Thick coal	7	0	0	at 418 yards.

In February they struck this limestone in the Hamstead Pits at 186 yards from the surface; it was 14 in. thick. The difference between the depth here and at Sandwell arises partly from an increased thickness of ground and the respective levels of the pit tops. At Sandwell from the surface to the Spirorbis Limestone is 123 yards. At Hamstead 186 yards, but the latter shaft commences at 70 yards below the level of the Sandwell Pit. Thus if both pits started at the same level the limestone would be found in the one at 123 yards, and in the other at 256 yards in depth. Although this limestone is not spoken of in the sinkings at Aldridge, there is every probability of its existence there, as also in the Essington Pits, where there is sufficient ground to hold it. A stratum of 12 or 14 in. is easily passed through without comment, especially when it is not unlike other bluish hard rocks of the coal measures. But in these districts, as in the south of our coal field, it should be carefully watched for in all sinkings. Over a very large portion of the coal field it is, of course, entirely denuded, and it is only in positions where the upper coal measures are brought in by faults that it is to be met with.

We now pass over some miles of country and reach Warwickshire, where the limestone occurs again. It is described by Mr. H. H. Howell in the Memoirs of the Geological Survey of Great Britain, under the head of "The Geology of the Warwickshire Coal Field and the Permian Rocks and Frias of the Surrounding District," published in 1859. It is from 2 ft. to 3 ft. thick, and occupies a position about 50 ft. below the Permian rocks. It has been worked at the outcrop for agricultural lime." We do not suggest that this limestone is constinuous the whole way, but it is remarkable that at Raw Beek, near Carlisle, at Canolicon, the Esk, in Dumfrieshire, and at Ballochmyle, near Catrine, in Ayrshire, it has been found, and more astounding still, Dr. Dawson, of Montreal, considers that certain limestones in the Canadian coal measures must be considered as the equivalents of our spirorbous limestone.

The great practical value and importance of this little stratum arises from its remarkable continuity over large areas, and thus giving the mining engineer a most valuable datum line. It may be aptly compared to a bookmarker, by means of which we are able to find a known place in the volume. But although so continuous itself, it does not follow that all the strata above and below are distributed with equal certainty. It would be a fallacy to state that because spirorbis limestone is found in any locality, therefore the Thick coal and lower measures of South Staffordshire must necessarily be met with. We might as well say that because the Thick coal itself is found, therefore that the new mine fireclay and bottom coals will be found below, in the same manner as we hear about them in the Cossley district. But we all know how great a change takes place in these lower measures southward, so as to be unrecognisable. Let us take one or two examples by way of illustrating what is meant.

In the Shrewsbury, Leebotwoods, and Uffington coal fields we have this spirorbis limestone associated with two and sometimes three coals of a more or less sulphurous character, but on descending deeper with the expectation of getting into the more productive coals which we know to exist in the Coalbrookdale coal field we come down upon Silurian or Cambrian rocks. The basin is shallow, and not deep enough to hold the productive coals. It was stated by a mining man of those districts only a few days since that the same strata as had been passed through at Sandwell were found in these Shropshire coal fields, and consequently he had not the slightest doubt that the Thick coal would be found beneath. Anyone who has examined the coal fields in question will see that such is an erroneous conclusion. Those fields are marginal to the great coal basin which ranges away into North and South Staffordshire, Cheshire, and Lancashire. There is consequently less depth for holding carboniferous deposits, but that depth increases as we approach the Coalbrookdale field, and there we find the lower and productive coals.

You are aware that the corelation of the Coalbrookdale and South Staffordshire coal field is pretty fully established. We would refer those who are interested to a paper on the subject which is printed at full length in the Colliery Guardian for Dec. 8, 1871. You would very naturally say then that in the locality of Coalbrookdale we should on passing through the spirorbis limestone come down upon the productive coals even as we do at Sandwell Park. The productive coal measures were deposited most certainly in that locality, because they are unhid in certain parts. That is quite true from the north of the coal fields to a line drawn from Ketley to Snedshill. South of that line the coal seams terminate one after another until only the lowest seams are met with, and ultimately they are lost altogether towards Fasley and Bridgnorth. The greatest thickness of coal measures in the Coalbrookdale field is over 1000 ft., and the geological margin for the spirorbis limestone is above this. You will be very much surprised then to be told that where the limestone is found on the south of the field, as at Broseley, it is about 170 ft. above the base of the coal measures. At Heman's Pit we have it at 105 ft. above the Pennystone measure, whereas at Lodgewood we have the Fungus coal and Chance Pennystone, and the geological position of the Spirorbis limestone is still higher if it were found there. I think through illustration it must be a conclusive proof of the fallacy of the statement that because Spirorbis limestone is met with, therefore, the productive coal measures must be beneath.

The explanation of the phenomena at Coalbrookdale is that after the productive coal measures were deposited they were in this locality largely denuded, remaining then, as at Broseley, to within less than 170 feet of the base, and at Fasley washing them away entirely; but in this vicinity the upper coal measures, with the spirorbis limestone, were deposited. This denudation is, of course, local and somewhat peculiar to the Coalbrookdale field, but it is a good illustration of the danger of drawing conclusions without studying the general structure of a coal field, and any special features such as this denudation. We have now brought to your attention an account of the range of this stratum and its extraordinary continuity, hence serving as an excellent datum line in all pit sinkings. You have seen a magnified specimen of the fossil shell, and examples of recent specimens. We have given you a drawing of the fossil magnified 1000 times, and a section of the Sandwell Park pit, showing the position of the stratum, and its relation to other strata. We have shown you that it is not always to be taken as a criterion of what may be found below it, but whilst we do so let it be understood that this paper has no reference to any sinking in colliery enterprise in South Staffordshire; and now we commend the spirorbis limestone to the attention of the mining engineers of South Staffordshire, who will be on the look out for it in all sinkings through upper coal measures.

* Read before the South Staffordshire and East Worcestershire Institute of Mining Engineers.

OPENING OF NEW COLLIERIES IN WALES.

We announced in last week's Journal that Lady Gooch (wife of Sir Daniel Gooch, Chairman of the Great Western Railway Company) had cut the first sod of two new collieries at Blaenavon, a few miles from Maesteg. For some years past the Great Western Railway Company has held mining property in the district, and that which it is now intended to open up at Blaenavon, covering an area of many miles, will be worked by the company for the purpose of supplying their engines with the celebrated Rhondda steam coal. The company have acquired very large tracts of mineral property in the district lying above Maesteg from the Gnoll trustees, the Earl of Jersey, and Lord Dunraven, and the trials made having proved satisfactory, and demonstrated the fact that a very rich and abundant coal field exists, works on a large scale will soon be commenced. It is intended to commence by opening up and working about 1000 acres, and the sinking of two pits is to be at once commenced. The coal which is about to be worked is the same class as the steam coal for which the Rhondda Valley has been so justly celebrated, and is a continuation of the same seam. It is calculated that the 4-ft. seam will be reached at a depth of 420 or 430 yards, after which will be gained in succession the 6-ft., 9-ft., and the lower 4-ft. seams. The company, however, do not intend to work any other than the steam coals, which they require for their own use; and the smaller seams lying near the surface of the ground will be woked by private individuals, several levels having already been struck into the mountain sides. When the new collieries are opened up quite a new town will be created, and a large population will be drawn together in a locality which has hitherto been considered as remote as any in South Wales.

The reason of opening up these new collieries by the company, as stated by Sir Daniel Gooch, is not a matter of speculation on the part of the directors, but as a means of supplying the wants of the company, and rendering the directors independent of contracts for the necessarily immense supply of their steam coal. Although only two shafts are about to be sunk for reaching the coal at the northern end of the valley, yet in course of time four others will be sunk in the southern, and other portions of the whole of the vast district will be opened up. Sir Daniel Gooch has on several occasions been down to Blaenavon inspecting the preliminary works and the laying out of the grounds, and the work has been carried out under the superintendence of his son, Mr. C. F. Gooch, engineer. To reach the new district it has been necessary to make a line of railway, several miles in length, which runs from the Tondu Junction, and is known as the northern extension of the Llynvi and Ogmore Railway. Messrs. Dobson, Brown, and Adams have been the engineers of the new line, which includes a tunnel nearly 1 mile long, and perfectly straight, and a viaduct 120 ft. high, said to be as fine a piece of work as any of its kind in South Wales. This new but short piece of line will be the means of diverting a large quantity of mineral traffic, making a much shorter route than formerly had to be traversed. If the Rhondda and Hirwain tunnel had not been abandoned the new line would have made a straight run from the district to Abergavenny. It is expected to be about four years before any output of steam coal will take place; the work, however, will be carried on with the greatest dispatch, the most approved scientific machinery will be employed, and nothing will be left undone by the company to facilitate the sinking of the pits. Already some of the machinery is on the ground, and a good deal of the preliminary work has been accomplished. The shafts will be 15 ft. wide inside the masonry. A pit will be sunk each side of the valley, which is near the source of the Avon; these pits will ultimately be made to meet underground. The river and the railway will be arched over, and the space between the two hills thus rendered available will be used as a tipping ground. The first sod was cut by Lady Gooch, the handsome spade used on the occasion being supplied by Messrs. Cross Brothers, of Cardiff, and bore an appropriate inscription.

Among those present at the opening ceremony were, Sir Daniel Gooch and Lady, Miss Ponsford, Mr. C. F. and Mrs. Gooch, Mr. A. W. Gooch (engineer of the Severn Tunnel), Mr. Galloway, Inspector of Mines, Mr. W. Wynn Kenrick and Miss Kenrick, Mr. and Mrs. E. Cross, Mr. T. L. Allen, superintendent of the Great Western Railway, Mr. Morrice, Mr. Thomas, Great Western Railway, Mr. J. Wesley Phelps and Mrs. Phelps, Mr. Hansom, Miss Lewis, Cardiff, Mr. Fou, Mr. Barrow, Llynvi, Tondu, and Ogmore Iron and Coal Company, Mrs. Barrow and daughter, and Mr. Howell, Maesteg, &c.

Mr. Phelps, of the firm of Kenwick, Phelps, and Co., the contractors for the works, presented the silver spade to Lady Gooch, and spoke of the great importance of the new undertaking, and after referring to the coal trade and its future, stated they considered it a good omen for success her ladyship cutting the first sod of the Avondale shafts. Lady Gooch then cut the sod, and turned it gracefully amidst the hearty cheering of the large assemblage of people who were present to witness the ceremony.

Sir Daniel Gooch, in responding, said he could only express the wish of himself and the Great Western Railway Company that the works might be carried on without injury to the men, and with success to the contractors and the Great Western Railway Company. The company entered into the matter not as a speculation, but to meet their wants. The works would give permanent employment to a large number of people, and that they would be carried on with success to all parties concerned, that good feeling would exist between the men and the company. Three cheers were given for Sir Daniel Gooch, the Great Western Railway, and the contractors of the undertaking.

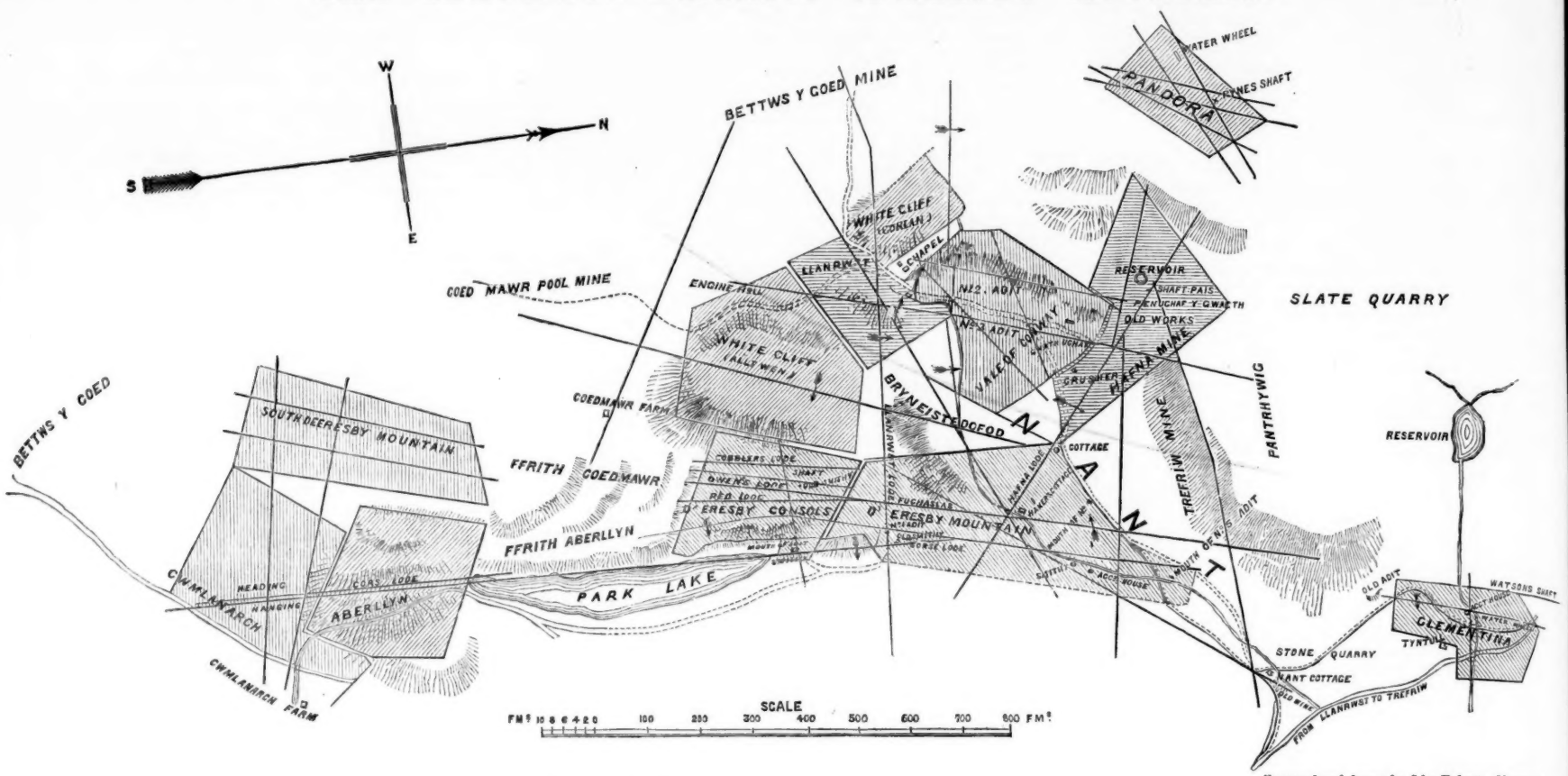
Mr. W. W. Kenrick, in acknowledging his thanks for the good wishes and compliment paid to him and his firm, stated that he had before him a large and heavy work, but they had come there to carry it out, and he meant to do so in a manner satisfactory to the company, workmen in his employ, and themselves. From the evidence surrounding them there was no doubt the investment would prove not only profitable to the Great Western Railway, but also of great benefit to that portion of the Principality by giving employment to a large number of people. Success was ensured to the capitalists, and though it could not be said they were entering a virgin district, yet it was an undisputed fact that the great wealth and riches before them and below their feet would have lain there buried for years to come were it not for the enterprise and skill of the directors controlling the interests of the Great Western Railway Company, to whom all honour and praise were due for the action they had taken in not only bringing by great outlay their railway system into the valley, but by taking the leading part in the development of its resources.

Mr. Barrow, mineral superintendent of the Tondu, Llynvi Valley, and Ogmore Iron and Coal Company, proposed three cheers be given to Mr. Gooch, jun., the engineer of the works. In responding, Mr. C. F. Gooch hoped the work so very favourably commenced would go on as favourably in the future. The men with him had been so far contented, and he hoped to act justly by them, and in future years when they had 2000 or 3000 men on the estate, they would work on together as heartily as they had already done. (Applause.)

The ceremony then terminated, and by invitation of the contractors the company partook of a sumptuous luncheon, which was supplied by Huntley, of Cardiff. The day was beautifully fine throughout. The visitors with the Chairman and his party arrived by special train in saloon carriages from Bridgend, and returned there in time to have their carriages attached to the 5 P.M. express for London. A very pleasant time was spent, the ride up the valley, through the passes, with the high hills on every side, was very en-

joyable, and it is hoped that work begun under such a happy augury cannot fail to have a succeseful completion. It was understood that the contractors are intending to use and adopt the most improved systems for the carrying out of the work, the greatest part of the sinking will be performed with a number of machine drills worked by compressed air, and the system of blasting will be exclusively by electricity. The senior partner, Mr. Kenrick, is a gentleman who, as a mining viewer and expert, has had very considerable experience in the opening out of large mining undertakings in this country and abroad. Considerable interest will be attached to this work as to the rate of progress made as it advances, and we shall be glad to furnish the readers of the Journal with monthly accounts of the same.

THE LLANRWST DISTRICT—D'ERESBY MOUNTAIN.



Surveyed and drawn by John Roberts, Llanrwst.

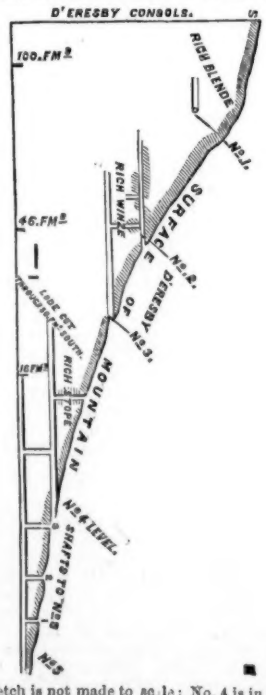
D'ERESBY MOUNTAIN.

In the columns of the *Mining Journal* not 12 months ago we gave our first impression of the mining district of Llanrwst. The D'Eresby Mountain Mine, the very name of which at that time was scarcely known beyond our own friends and clients, was fully referred to and described; we gave our reasons why it had been, not inaptly, called a "mountain of lead," and added that it looked as if "great success might shortly be attained with a very small outlay."

We then found it covered with old shafts and levels, which must, as we said, have yielded the old miners vast quantities of lead in their rude attempts at mining. We found "remains" of "old and primitive smelting-works," and that four distinct levels had been driven into the hill, from which large quantities of lead had been raised. In No. 1 level there was a remarkably fine lode, from which rich lead and about 20 tons of blende had been raised by the present company, and which showed great prospects for success. No. 2, or the intermediate, level had been very productive in former times, and a winze had been sunk in a rich course of lead as far as the water would admit. No. 3 was then a long way off this winze, and to get under it, drain this water, and so get at the lead was then the main object of the company.

This was the position of the mine on our visit in June, 1877, with another director. At that time, finding a convenient space for dressing-floors near a stream of water by No. 4, we ordered that level to be cleared, and an iron tramway put down for the transit of the ore from the upper levels to the crusher which was to be erected on this spot. On clearing the level for this purpose the discovery of the rich heading of the Gorse lode was made. This caused great excitement in the neighbourhood, and has thrown the other good points of the mine, for which it was originally started, into the shade.

Some hundreds of fathoms down the valley to the north there was the mouth of another adit level, called No. 5, which thus became of the utmost importance to the D'Eresby Mountain, but it was outside the grant, and the entrance to an old mine, called Gwydyr Consols, which some 30 years ago made large returns of lead, and as much as 3000*l.* in a year profit from a shallow level, which broke in upon the principal workings and stopped them. We, therefore, a month or two ago obtained the grant of this sett, and it has just been added in a new lease to D'Eresby Mountain, making it one of the largest setts in the district; and in order that our present description of the mine may be better understood, we refer our readers to a sketch, which shows the face of the mountain from No. 1 level driven into



SKETCH.—This sketch is not made to scale; No. 4 is in reality about the centre of the sett, and the shafts 3, 2, 1 should be further down the valley, but they will serve to illustrate the description.

it on the top, to No. 5 in the valley, nearly a mile in length. This latter level, it will be seen, will come in 16 fms. under the rich stope; 46 fms. under No. 3; 62 fms. under No. 2; and 100 fms. under No. 1. The plan of the district will show our readers the situation of the mine and its surroundings. The whole has been surveyed and the lodes traced by Capt. Roberts, who vouches for the correctness of his work.

In No. 1 level the lode is 5 ft. wide, rich throughout for blende and lead, and several tons of the former have been broken.

No. 3 level is now getting under the winze from No. 2, and a good pile of lead has been raised from the drivages.

In order to understand No. 4 we may state here that the Gorse or great champion lode of the district is in some places more than 30 ft. wide, and made up of two or three distinct parts—one composed of soft shale, having in it occasionally almost solid lead; then several feet of blende, with the "heading," which is also of great width, and composed of beautiful white spar, interspersed throughout with lead, and some of it remarkably rich. Now, No. 4 level was driven by the old miners in the shale, or soft part of the lode, and from this they evidently made large returns of lead. In laying down the tramway before referred to, Capt. Bennett was struck (last November) by an appearance of lead and spar in the side of the level, and his curiosity being excited he had a hole blasted, and it resulted in a fall of lead, and the discovery of the heading of the Gorse lode standing entire along the side of the old miners' level: 30 fms. further south the lode was again cut through, also of great width, and of the same character as at the stope. From this stope (as it is shaded in the sketch), which is 5 fms. long and 18 ft. wide, and where two men are working, upwards of 2000 tons of leadstuff have already been broken, and it will take several months' work to exhaust it, as the lead crops up to the surface. When Mr. Jehu Hitchins went into this stope a short time ago he said he had seen nothing like it since he had visited Van some years since with the present writer, and he added that the supply of lead would be almost unlimited. What Mr. Hitchens states, from his great experience, scarcely requires any confirmation from us; but we may add also that never since that time at Van have we seen such a lode as we saw on Thursday, nor do we think there are many such to be found at the present day.

In regard to the unlimited supply of ore, many people have supposed that this rich stope was merely a "squat," or pocket of ore, into which the agents had luckily tumbled; therefore, they seemed to question Mr. Hitchins's "unlimited supply." A reference to the sketch, however, will explain this matter. The shaded part shows the extent of the present stope, which is being worked up to surface. On the right hand northwards there is a large piece of ground of the same character untouched upwards of 50 fathoms long, and coming down to a point at the mouth of No. 4; this also has to be stoped away. Then, again, 30 fms. on the other side of the stope, where the lode has also been cut through, and where the ground rises with the mountain, the agents hope to get, as Bennett says, "some hundred of thousands of tons" of stuff; and the theory is that the lode is standing whole alongside the level far beyond even this 80 fathoms where it has been intersected.

We now come to No. 5, the importance of which will be seen by a reference to the plan. The opening is in the valley some 250 fathoms below No. 4; nearly up to the small shaft (No. 1) it was crushed in and broken, and took several months and great expense to clear and secure. That expense is over now, and the three shafts, which are all sunk *in the shale* for ventilation, have been cleared up. No. 1 is 4 fms. deep; No. 2, 7 fms.; and No. 3, 10 fms. These shafts, as we have said, are all on the shale part of the lode; the other part is standing whole. This level will now be continued, cleared, and secured till it gets under the rich stope in No. 4, and if the "heading" is found equally good here, its importance can scarcely be overrated. And in considering this point we must remember that not only No. 4 but No. 5 levels were entirely in the shale, just as the ventilating shafts were sunk in it, and one or two theories are suggested by this proceeding, either for want of a short cross-cut the old men missed the "heading" altogether, or, having no machinery whatever to dress their ore with, they took away only the more solid lead which they found in the shale, and could easily break and dress with their hammers, and left that which was in the spar untouched. Whichever theory is correct, it is quite clear they left the "heading" in No. 4, and the probability is it will be found that they also left it in No. 5, for had they discovered it in the latter they would, as a natural consequence, at once have gone up to No. 4 to seek for it there.

We have said before that the piece of ground from the mouth of No. 5 to No. 4 has lately been added to D'Eresby Mountain sett, entirely for the use of this level, which can now be driven into the hill, so as to cut all the lodes at a great depth; and in the mountain itself there is a mine large enough for any one company to work. Indeed, the only fear Capt. Bennett expressed to us on our visit was that even the large stone-breaker and crusher that are now in course of erection will not be sufficient for all the ore he can raise at No. 4, and as he has satisfied himself that a rich mine could also soon be opened out in the valley, he is for erecting another wheel and sinking below the No. 5 at once, for just opposite No. 2 shaft (in the shale), and within a few feet of it, there is an old shaft full of water; around it, and entirely covered with grass, there are some large stones, which on being dug up and turned over on Thursday last proved to be very rich for lead, with all the characteristics of the lode in the stope. While, therefore, No. 2 was sunk in the shale, this shaft was evidently commenced in the "heading," and sunk as far as the water would admit. This shaft Bennett wants to clear, and sink on the course of the lode below No. 5. So satisfied is he of the value of this lower sett that he has great anxiety to risk 50*l.* himself in working it, if D'Eresby Mountain wont. And it has been suggested to us by two or three parties who have seen the mine, that while D'Eresby Mountain retained the free use of the adit, for which alone the extra sett was obtained, the company should for a consideration (say, of 2000*l.*) allow a "Valley Company" to work the lower ground. Suppose, for instance, the latter company was in 512 shares, of 10*l.* each, and were taken up by the D'Eresby Mountain holders *pro rata*, they would, it it is said, at once be cent. per cent. premium. Of course, we are not prepared to say that such an arrangement can be carried out, but it would certainly be of great mutual advantage if it could be.

Summed up, the advantages to D'Eresby Mountain Company would be these:—1. The use of No. 5 adit without further cost in the Valley, and the return of the outlay made upon it.—2. The sum of 2000*l.* in cash to develope the Hafna and other lodes in the mountain (all of which may be cut at the depths above indicated by continuing No. 5 into the hill), so that dividends might be declared from the early sales of lead from the Gorse lode.—3. Should the shareholders themselves take up the shares in the Valley *pro rata*, they would get for 10*l.* a share likely to reach a high price at once, and possibly go as high in time as D'Eresby Mountain are at present.—4. While in D'Eresby Mountain all the lodes were being worked into the hill above No. 5, the Valley shaft would go down on the Gorse lode *below* it, and work it to a great depth *under* that level.

We throw these hints out for the consideration of the shareholders in a month or two's time, and if we are asked why the present company do not undertake *both* works, the reply is that the capital at its command at present is required in erecting machinery to bring the Gorse lode at No. 4 into profitable working, and it seems a great pity to allow such a valuable property as the Valley to be undeveloped below No. 5.

We should add that the Hafna lode runs through D'Eresby Mountain sett, as will be seen on the plan, for nearly 400 fathoms, and is 12 feet wide.

D'ERESBY CONSOLS.—Anyone referring to the plan must see that the situation of this mine in regard to D'Eresby Mountain, together with the number of lodes it contains, is remarkably favourable; and as, 12 months ago, we described D'Eresby Mountain as regularly scored by old workings, we may now, on our first visit here, describe this in a similar manner, only that the old works are on a much larger scale, and show conclusively that great quantities of lead must have been raised, although the ground at the surface is much harder and more rocky. The Cobbler's lode was so rich to the depth it was worked, as the story goes, that several houses in Llanrwst have been built from the proceeds the cobblers got from it. On Owen's lode, which Capt. Roberts thinks is the Fuchsias lode of D'Eresby Mountain, there is a deep open chasm for several fathoms in length worked up to the surface, and with water in the bottom just as the old miners were obliged to leave it, and it was here that four men broke great quantities of lead in a short time. From the lake in the valley an adit level has been driven 200 fms., at a cost of upwards of 3000*l.*, to get under these workings. The agents have the iron now ready for a tramway along this level, and by continuing it about 7 fms. further it will come under the open chasm referred to on Owen's lode, and in 30 fms. get under the Cobbler's lode, 20 fms. deeper than the old workings, which extend about 300 fms. in length.

There is another important point in connection with this mine, and to which we called the agents' attention. If our readers will refer to the plan they will observe that No. 1 level on D'Eresby Mountain is driving on a remarkably fine lode for lead and blende directly towards D'Eresby Consols; this level, in fact, will come in and unwater D'Eresby Consols 20 fms. deep. We advise, therefore, that the back of this lode should be found near the boundary, and a shaft sunk upon it. This might result in an early discovery at D'Eresby Consols. Of course, it is not possible for mortals to command success in anything, and mining is proverbially uncertain, but both Capts. Roberts and Bennett are on their mettle, and will do all in their power to deserve and secure it here, as they have done in D'Eresby Mountain. That there are great capabilities in this sett no one can doubt. And here we may observe that the great Gorse lode divides into two parts before it reaches D'Eresby Consols—the "heading," or that part of it now worked in the rich stope in the mountain, passes through D'Eresby Consols; the main part passes under the lake, which some people think is formed from the back of it, and both parts join again in Aberlyn. The "heading" in D'Eresby Consols, as seen in the sketch, and as Capt. Roberts has traced it at sur-

face, seems to be thrown up by the rise of the mountain, and turns again on the brow of it. In proof of this it is now being opened upon in D'Eresby Consols, and has been opened upon and worked in Aberlyn.

ABERLYN.—This mine Capt. Roberts considers second only to D'Eresby Mountain. It has both the main part of the Gorse lode and the "heading" running completely through the sett, and they have both been opened upon from three adit levels, driven at great cost into the hill. In one the lode is 12 ft. wide, and worth 8 tons of rich blende per fathom. Many tons have been broken, and from it large monthly returns can be made.

A waterfall passes through the mine, and there is an unlimited supply of water all the year round for any number of wheels and dressing-floors. Some months ago the mine was purchased for a considerable sum of money, and it will take 1000*l.* to erect machinery, dressing-floors, and make a tramway down a short incline to the high road, not far from the railway station of Betys-y-Coed. When this is done the mine can make immediate profits from blende alone, to say nothing of the lead; and it is a question with the proprietors whether they shall lay out this money themselves, and so bring the mine to a much greater value before parting with it, or form a company at once and take what they conceive to be its present value in paid-up shares.

CLEMENTINA may be called the parent of D'Eresby Mountain, and also of the modern district around it, inasmuch as all the shares in D'Eresby were allotted in the first instance to shareholders in Clementina. Under a former working the mine made large returns of lead from shallow depths, and from one level (the 25) 1500*l.* worth was sold. When the present company took the mine their object was to sink the shaft 20 fms. below the 25, and prove the lode under the ore ground in that level. For this purpose there was a water-wheel, and a good supply of water at times; in fact, in a wet season the water ran to waste, and in a dry one there was often not enough to turn the wheel, and the sinking was so interfered with that a new lease was obtained, including 3 acres of hollow ground up the mountain to form a reservoir of that extent, and large enough to store water for the wheel to be kept constantly going. After some months labour and great expense the reservoir was completed and filled with water. The embankment was strong enough, the agent states, for double the pressure upon it, but an outcry among some cottagers seems to have been raised against it, though there could not possibly have been any danger, and the Government Inspector gave orders to have it strengthened and heightened. To do this all the accumulated water had to be let loose again, and although all that the Inspector required has now been done to the reservoir, the weather has not been auspicious for filling it again, and at our visit it was empty. We may add there had been scarcely any rain in Wales for three or four months, but on the very morning of our visit it commenced a downpour, through which we had to tramp, and which prevented our seeing other mines that we had intended to visit. The result of this loss of water for so many months caused expense to the company and delay in sinking the shaft, which is now down only to the 34, and a level has been driven on the course of the lode. During the sinking about 8 tons of lead were raised and sold, and there is at present a stope working in a shallow level with good backs, worth 1 ton of lead per fathom. When the reservoir gets full the water will be pumped from the shaft, and sinking resumed. The 34 fm. level will also be driven east, to get under a shaft now full of water, and in which there is said to be a rich course of lead. When unwatered this shaft will be sunk on the course of the ore. A large water-wheel will also be erected, to command this as well as the engine-shaft.

When the mine was started great expectations were formed as to its early success, but the want of water has delayed it, and the D'Eresby Mountain has thrown it into the shade. Capt. Bennett, however, who has known the mine and everything connected with it for many years, and upon whose report we were induced to take it up, assured us on Wednesday that his faith in it is not at all shaken, and he is sanguine as ever that it will prove a profitable and good mine. It was formerly in 128 shares of 20*l.* each, but fresh capital has had to be raised, and it is now in 5000 shares of 1*l.* each, with a working capital of 2560*l.*

THE SCOTCH MINING SHARE MARKET—WEEKLY REPORT AND LIST OF PRICES.

During the past week business has slightly tended in an improving direction, though still held in check by the unsettled state of the political situation. Judging from the unexpectedly favourable nature of the Board of Trade Returns for April, the easier tendency of the money market, and the prospects of a better time this year for the agricultural interests, the chances are the recovery in the share markets is much nearer than for a long time past if only the political situation became tranquil.

In shares of iron and coal concerns Arniston are now quoted ex interim dividend of 7 per cent.; as this dividend compares with 6¼ per cent. at the corresponding period last year it is an instance, rather unusual in past years, of an improvement in colliery property, but which it is to be hoped will now become more usual. Ebbw Vale and Marbella are each 5s. lower. Park Gate firm on the dividend recommended. The adjourned meeting of John Bagnall and Sons is to be on May 21. The Scottish Australian report is considered good, as the general coal trade of the colony is fairly supported, and the company's course in restricting the expenditure on the copper properties will commend itself to all. Altami are at 80s. Andrew Knowles and Sons, 82s. 6d. dis. Bilbao, 27¼. Bolckow, Vaughan, B, 34; ditto 5 per cent. (preference), 19¾. Bilson and Crump Meadow, 8½. Cardiff and Swansea, 17s. Chapel House, 60s. to 65s. Chatterley, 35 dis. Crown Preserved, 20s. Ebbw Vale, 6 to 8. Great Western, 45s. Mwyndy, 30s. Nant-y-Glo and Blaina (preference), 17 to 19. New Sharlston (preference), 60s. to 80s. Newport Abercarn, 60s. Pelsall, 12½ dis. Rhymney, 17. Scottish Australian, 35s. to 37s. 6d. Sharp, Stewart, and Co., 25. South Wales, 5. Stavely, A, 17¾ premium; ditto, B, 55s. premium; ditto, C, 7; and ditto, D, 12¾. Thorp's Gawber Hall, 53s. 9d. Tredegar, A, 10½. West Cumberland, 7½ to 8¾. West Mostyn (preference), 25s.

In shares of foreign copper and lead companies, Rio Tinto Five per Cents. at 59½ to 60 are 45s higher, and the Seven per Cents. 16s. 3d. also higher. Tharsis old shares have advanced 1s. 3d., but the 7*l.* paid issue is 2s. 6d. easier. Yorke Peninsula are reduced 1s. 3d., at 3s. to 5s., and the Guaranteed Preference 2s. 6d. lower. Cape are 15s. lower, and the meeting is to be on the 29th inst. Hultafall are firm at 75s. to 80s., as the reports given by two of the directors just returned from the mine are good. Arendal offered. English and Australian are at 20s. Kapunda, 1s. 3d. Panulcillo, 15s.

Shares of home mines have been dull. Grogwinion, Wye Valley, and one or two more which seem to be producing good quantities of lead, are enquired for. West Tankerville are almost unsaleable, although the mine is improved. Bampfylde are at 4s. Combmartin, 5s. D'Eresby Consols, 12. East Chiverton, 32s. 6d. Killifreth, 1s. Leadhills, 80s. Pandora, 16s. Rhosesmor, 33s. Rookhope, 17s. to 19s. South Condurrow, 11 to 11½. Tankerville, 82s. 6d.

In shares of gold and silver mines, Richmond and Santa Barbara are now quoted ex div., the dividend on the latter being 1s. per share, payable May 31. The Richmond run this week is $80,000. Eberhardt and Last Chance have advanced on last week's reports, but Don Pedro are easier. St. John del Rey unaltered. The advices from Almada and Tirito are not so good, on account of the drought, but the mine is improving. Chontales has made a loss on March of 271*l.*, but Javali shows the very satisfactory profit of nearly 1000*l.* with appearances in favour of a continuance of the good quartz. Flagstaff are higher, as the mine is reported to be turning out very well, and $22,000 were realised from the ore sales in 20 days. For the month ending April 24 the Port Phillip Company's quartz was 378 ozs., and tributers' 1205 ozs.; the profit was 1430*l.*, of which 800*l.* is being remitted. Cedar Creek are at 5s. to 6s. Emma, 1s. 6d. Frontino, 35s. Pestarena United, 3s. 6d. to 4s. 6d. Rossa Grande, 2s. to 4s. South Aurora, 3s. to 5s. Santa Barbara, 22s. to 24s. Tecoma, 4s. 6d.

In shares of oil companies Young's Paraffin are firm at an advance of 8s. 9d. Uphall 1s. 3d. also higher. Oakbank (new) easier. Runcorn Soap and Alkali are at 7¼ dis. The dividend recommended by the Uphall Company is 2 per cent., against 7½ per cent. at this time last year. Shares of miscellaneous companies show little alteration. Fairbairn Engineering are in request. Diamond Rock Boring are at 35s. Hamer's Salt, 95s. Hopkins, Gilkes, and Co., 9½ dis. New Sombrero Phosphate, 7¼. Phospho Guano, 9. Val de Travers, 5¼. In wagon companies prices are: Bristol and South Wales, 7½. Gloucester, 9½. Scottish, 11, and Swansea, 52s. 6d. Chemical companies shares are firm all round: Langdale's, 92s. 6d. to 95s. Lawe's, 8 to 8¼; ditto 7 per cent. (preference), 10 to 11; and Newcastle, 20s. to 25s. (7*l.* paid.)

On Contango day (Monday) the following were the rates of continuation current: Contangos, 1d. on Glasgow Caradon; 1d. on Port Washington; 1d. on Huntington; 2¼d. on Marbella; 1d. on Monkland; 6d. on Richmond. Backwardations: 1s. 3d. on Tharsis; 3d. on Uphall Oil; 6d., 4½d. even on Young's Paraffin. The rate on Young's Paraffin subsequently went to 9d. contango. On comparing the making-up prices fixed to-day for the shares named with those for the same shares the previous settlement, the variations thus shown to have taken place during the account are: Young's Paraffin have advanced 10s. per share; Tharsis, 8s 9d.; ditto (new), 5s.; and Uphall, 1s. 3d. Glasgow Caradon are 6d. lower, and the following are unaltered: Canadian Copper, Glasgow Port Washington, Huntington, Marbella, Monkland, Omoa and Cleland, Richmond, and Oakbank Oil.

BODELVA CHINA-CLAY COMPANY.—This company, which was established some time ago under the Joint Stock Companies Act, has been successful in raising the moderate capital required from time to time, and a further small issue of 10*l.* shares, 9*l.* to be paid-up, will, it is estimated, close the capital account. There seems to be no doubt that it has a prosperous future before it. The property is situated about two miles from St. Austell—the centre of this particular trade, and in the neighbourhood of two of the most profitable works. The plant is capable of dealing with 5000 to 6000 tons per annum, and regular shipments are being made. The clay is of a good quality, and owing to the property possessing water-power and facilities for disposing of the refuse, as well as a low scale of dues, it stands in a comparatively good position to similar companies.

OAKBANK OIL COMPANY (Limited).—This company's business has not been so profitable last year as the preceding one, in consequence of the decline in the market value of their produce. The American production has again, as in 1873, become so much beyond the consumption as to reduce the market value to a low point. The directors of this company, however, regard the world's consumption of oil as certain sooner or later to overtake the supply at present prices, and thus in the future enable producers to realise a higher price for their oil. The company's reserve fund is 7398*l.* During the year the accounts show an expenditure of 581*l.* on new plant and heritable property, but during the current year this item is not likely to exceed 500*l.* The company's works are fairly proportioned to the work to be done by each department, and perfectly sufficient to do somewhat more than can easily be disposed of, so the directors have determined to delay any further addition to their house accommodation, or any conversion of retorts, though, in the event of a rise in wages or coal, it may become prudent to alter this. The capital account is practically closed, and in the case of the pit which has for some years been the source of unexpected demands this very gratifying. The Calderhouse shale field is now regarded as thoroughly won, and in the accounts the directors take credit for 538*l.* paid as fixed rent in past years, and now being repaid by royalties on the output. The works, it should be understood, are kept up out of revenue, and 10 per cent. written off for depreciation every year.

Subjoined are this week's quotations, &c., of mining and metal shares quoted on the Scotch Stock Exchanges:—

Capital per share.	Paid up.	Dividends. Rate per cent. per annum. Previous.	Last.	Description of shares.	Last price.
				COAL, IRON, STEEL.	
£ 10	£8	£ 7½	£ 7†	Arniston Coal (Limited)	7
10	10	4	4	Benhar Coal (Limited)	8/.13s 6d
100	50	22s6d‖	31s6d‖	Bolckow, Vaughan, and Co. (Lim.)	A. 54¼
10	10	10	10	Cairntable Gas Coal (Limited)	8½
10	10	4s‖	April, 1876	Chillington Iron (Limited)	60s.
23	20	10s‖	Dec., 1874	Ebbw Vale Steel, Iron, and Coal (Lim.)	6½
10	6	nil	nil	Fife Coal (Limited)	70s.
10	10	nil	nil	Glasgow Port Washington Iron & Coal (L)	25s.
10	10	—	—	Ditto Prepaid	40s.
10	10	—	—	Lochore and Capledrae (Limited)	80s.
10	10	nil	3	Marbella Iron Ore (Limited)	50s.
10	10	nil	nil	Monkland Iron and Coal (Limited)	3½s.
10	10	5	4	Ditto Guaranteed Preference	60s.
100	100	nil	nil	Nant-y-Glo & Blaina Ironworks pref. (L)	19
6	6	nil	nil	Omoa and Cleland Iron & Coal (L. & Red.)	7s. 6d.
1	1	15	15	Scottish Australian Mining (Limited)	37s. 6d.
1	10s.	15	15	Ditto New	18s.
Stock	100	nil	nil	Shotts Iron	91
				COPPER, SULPHUR, TIN.	
4	4	—	—	Canadian Copper and Sulphur (Lim.)	4s.
10	7	5†½	5	Cape Copper (Limited)	29
1	1	7½	2½	Glasgow Caradon Copper Mining (Lim.)	20s.
1	15s.	7½	2½	Ditto New	13s.
10	9¾	nil	nil	Huntington Copper and Sulphur (Lim.)	33s. 6d.
25s.	25s.	—	—	Kapunda Mining (Limited)	1s.
4	4	—	—	Panulcillo Copper (Limited)	15s.
10	10	6†	6†	Rio Tinto (Limited)	60s.
20	20	7	7	Ditto, 7 per cent. Mortgage Bonds	13/ 18s 3d
100	100	5	5	Do., 5 p.ct. Mor. Deb. (Sp. Con. Bds.)	69
10	10	22½	20	Tharsis Copper and Sulphur (Limited)	22/ 1s 3d
10	7	22½	20	Ditto New	15
1	1	—	—	Yorke Peninsula Mining (Limited)	5s.
1	1	—	—	Ditto, 15 per cent. Guaranteed Pref.	15s.
				GOLD, SILVER.	
1	1	—	—	Australian Mines Investment (Limited)	8s.
5	5	7s. 6d‖	7s. 6d‖	Richmond Mining (Limited)	9½
				OIL.	
10	7	6	15	Dalmeny Oil (Limited)	7¾
1	1	7½	25	Oakbank Oil (Limited)	40s.
1	5s.	—	25	Ditto	10s. 9d.
10	10	2½	7½	Uphall Mineral Oil (Limited) "A"	5/ 18s 9d
10	10	—	—	Ditto "B" Deferred	10
10	10	—	—	West Calder Oil (Limited)	40s.
10	8¾	9	17½	Young's Paraffin Light & Mineral Oil (L)	18½
				MISCELLANEOUS.	
50	25	5	6	London and Glasgow Engineering & Iron Shipbuilding (Limited)	24¼
7	7	10	15	Phospho Guano (Limited)	9¼
10	10	6	6	Scottish Wagon (Limited)	11
10	4	6	6	Ditto New	8½

NOTE.—The above lists of mines and auxiliary associations are as full as can be ascertained, Scotch companies only being inserted, or those in which Scotch investors are interested. In the event of any being omitted, and parties desiring a quotation for them and such information as can be ascertained from time to time to be inserted in these lists, they will be good enough to communicate the name of the company, with any other particulars as full as possible.

J. GRANT MACLEAN, Stock and Share Broker.
Post Office Buildings, Stirling, May 16.

THE COAL AND IRON INDUSTRIES OF SCOTLAND.

By RICHARD MEADE, Assistant Keeper of Mining Records, Museum of Practical Geology.

Having in a previous notice considered the extent, area, and production of the coal fields of Scotland, the next point to which it is proposed to direct attention is the distribution of coal coastwise and exported to foreign countries, and that sent by railway, following with analyses of the several varieties employed in gas and iron smelting, and some varieties of house coal. Very full and complete information is found in the Annual Parliamentary Returns of Coal, Cinders, &c., and from these returns the following statement has been prepared, showing for the years named the quantities, distinguishing that sent coastwise from that exported. Previous to the beginning of the present century the annexed shows the respective quantities:—

Year.	Coastwise. Tons.	Exported. Tons.
1790	74,925	33,416
1791	82,446	36 679
1792	71,073	29.752
1793	67 396	20,062
1794	61,687	30.502
1795	56,014	20,107
1796	71,891	31.115
1797	52,745	19,431
1798	58,923	24,849
1799	52,029	11,838

In the year 1830 and subsequent years, from the Western Ports of Scotland, were shipped the following quantities:—

	Glasgow.			Irvine.		
Year.	Coastwise. Tons.	Exported Tons.	Total. Tons.	Coastwise. Tons.	Exported. Tons.	Total. Tons.
1830	—	3,167	3,167	—	5,847	5,847
1835	77,913	7,469	85,382	147,049	3,078	150,127
1840	87,119	25,126	112,245	252,976	19,126	272,102
1845	64,975	29,376	96,351	179,980	35,403	215,383
1850	71,122	37,184	108,306	191,420	72, 67	264.087
1855	89,210	47.608	136,818	264,625	48,257	312,882
1860	104,931	55,058	159,989	387,319	129,799	497,118
1865	116,513	88,851	205,364	—	—	—
1870	151,685	163,073	314,758	—	—	—

The shipments from Ayr and Greenock in each of the same years were:—

	Ayr.			Greenock.		
Year.	Coastwise. Tons.	Exported. Tons.	Total. Tons.	Coastwise. Tons.	Exported. Tons.	Total. Tons.
1830	—	—	—	—	12,102	12,102
1835	53,432	589	54,021	535	13,998	14,533
1840	91,196	442	91,638	782	27,312	28,094
1845	81,521	371	81,892	568	23,318	23,886
1850	70,780	1484	72,264	623	20,759	21,382
1855	64,400	26	64,426	80	27,220	27,300
1860	65,453	1410	66,863	14,700	49,105	63.805
1865	119,612	985	120,597	10,176	82,508	92,684
1870	99,863	2805	102,668	12,759	133,114	145,863

Turning to the ports on the Eastern Coast of Scotland, a few of the principal have been selected, showing the coal shipped coastwise, and exported, in each of the following years:—

	Grangemouth.			Borrowstowness.		
Year.	Coastwise. Tons.	Exported. Tons.	Total. Tons.	Coastwise. Tons.	Exported. Tons.	Total. Tons.
1830	—	1,670	1,670	—	15,344	15,344
1835	76,675	5,109	81,784	110,616	23,640	134.256
1840	81,700	10,767	92,467	130,608	39,339	169,947
1845	4,979	11,794	16,953	67,653	73,656	141,311
1850	7,242	19,131	26,373	46,985	70,006	116.991
1855	2,334	53,082	55,416	37,637	109,341	146,978
1860	1,799	62,409	64,208	124,354	151,973	276,327
1865	3,119	118,036	121,155	88,265	162,029	250,294
1870	1,793	109,696	111,490	73,815	219,493	293,308

	Kirkcaldy.			Leith.		
1830	—	2,550	2,550	—	2,872	2,872
1835	47,049	4,557	51,606	43,774	7,511	51,285
1840	52,282	10,875	63,157	25,007	17,952	42,959
1845	45,105	20,779	65,884	8,831	9,721	18,552
1850	38,525	46,418	84,943	2,193	11,650	13,843
1855	39,266	28,465	67,731	10,401	29.853	40,254
1860	43,828	73,769	117,597	6,696	35,593	42,289
1865	49,001	121,560	180,561	17,772	87,144	104,916
1870	60,081	204,890	264,971	12,837	104,657	117,494

The other principal ports shipping coal on the Eastern Coast of Scotland are those of Dundee and Alloa; the foregoing, however, will sufficiently show the extent and yearly increasing importance of the coal shipped coastwise and exported.

Without entering into minute details of the distribution of coal by sea, it will be generally interesting to glance at the total quantities of coal shipped in each of the following years, distinguishing that sent coastwise from that exported, and giving side by side the production of coal in Scotland in each of the same years:—

Year.	Coastwise. Tons.	Exported. Tons.	Produce of Scotland. Tons.
1856	539,407	510,651	7,500,000
1858	565,704	543,377	8,926,249
1860	743,214	653,432	10,900,000
1862	857,786	813.525	11,076 000
1864	870,877	869,493	12,400,000
1866	819,029	971.519	12,625,000
1868	923,001	1,438,013	14,709,959
1870	1,062,693	1,338,898	14 934,553
1872	1,171.340	1,569,674	15,383 609
1874	1,080,867	1,897,933	16,788,661
1876	1,307,296	2,335,660	18 665,612

It thus appears that in a period of twenty years ending 1876, that while the coal produce of Scotland and that sent coastwise has increased more than twofold, the quantities exported during the same period increased more than fourfold, facts in themselves exhibiting great progress. Before disposing of the distribution of coal coastwise and that sent to foreign countries, the returns for the years 1836 and 1876 have been selected, and show at a glance the quantities shipped respectively in each of those years, and the great expansion that has marked the development in a period of 40 years:—

Port from which shipped.	1836. Coastwise.	1836. Exported.	1876. Coastwise.	1876. Exported.
Leith ..... Tons	29,741	9,584	17 513	319,098
Grangemouth	61,495	4,688	6,713	200.339
Borrowstouness	107,332	22,808	27,382	359,247
Kirkcaldy	46,710	6,370	53,727	286,.75
Dundee	—	657	15,006	104,219
Montrose	—	14	2	—
Greenock	461	12,787	10,502	168,250
Glasgow	72,254	8,505	214,754	338,601
Port Glasgow	—	2,996	—	—
Irvine	186,161	7,635	—	—
Ayr	43,922	244	275,267	9,747
Troon	—	—	441,741	183,498
Dumfries	—	4	—	—
Granton	—	—	60,176	144,242
Kirkwall	—	—	—	12
Alloa	—	—	17,475	116,821
Lerwick	—	—	—	50
Aberdeen	—	—	50	1,380
Peterhead	—	—	—	20
Campbeltown	—	—	27	—
Stornoway	—	—	—	1,450
Ardrossan	—	—	164,962	102,111
Total	548,076	76,232	1,307,296	2,335,660

Previous to the year 1850 a duty was levied on all coal and cinders exported, but an Act passed in that year, dated Aug. 18 (13 and 14 Vict.) wholly repealed all duties on coals exported.

DISTRIBUTION OF COAL BY RAILWAY.—An early return in 1854, prepared by Mr. R. Williams, then Her Majesty's Inspector of Collieries for Scotland, gives the production as 7,448,000 tons of coal; for the same year, the Caledonian Railway carried of minerals 404,168 tons, of which 251,932 tons were coals, received at the following stations:—

Stations.	Tons.	Stations.	Tons.
Edinburgh	24.034	Barrhead	49,163
Glasgow	54,466	Pollockshaws	10.982
Greenock	54,024	Holytown	42 414
Carlisle	4,751	Greenhill	12 098

In the same year the total shipments coastwise was 363,774 tons, the exports amounting to 198,361 tons. Not again until the year 1858 do we find any data bearing on the distribution of coal in Scotland. In that year the production of Scotland, amounting to 8,926,249 tons, was thus disposed of:—

How distributed.	Tons.
Consumed in ironworks	3,750 200
Exported coastwise	565,672
Exported to foreign countries	543,377
Consumed in manufactories	1,750,000
Employed in steam-vessels	602,000
Employed on locomotives and railways	465 000
Colliery consumption and domestic use	1,250,000
Total	8,926,249

Advancing to the year 1867, the following information, showing the quantities of coal conveyed by the several railway systems, throw considerable light on the coal industries of Scotland and their development:—

Railways.	Tons.
Caledonian	3 198,960
North British	2,739,940
Glasgow and South-Western	1,738.787

The total production of Scotland the same year was 14,125,943 tons; that of the United Kingdom, 104,500,480 tons. Of the coal carried by the Caledonian railways the Lanarkshire coal fields contributed 3,133,035 tons, Stirlingshire 17,444 tons, and Renfrewshire 48,481 tons; while of the coal carried by the Glasgow and South-Western Railway 897,999 tons was for shipment, 340.912 tons to local stations, and 499,876 tons for consumption in ironworks.

In subsequent years the quantities carried by the several railways appear in the annexed abstract:—

Year.	Caledonian. Tons.	North British. Tons.	Glasgow and South Western—tons
1869	4,023,209	3,907,064	1,690,207
1870	4,648,665	3,197.001	1,841.571
1871	5.014 894	3.600,618	1,937,177
1872	5,229.093	3,797.249	2,084,894
1873	5,305.060	4.016.351	2,163,263
1874	5,443.525	3 841.856	2,042,358
1875	5,942 943	4.558.098	2,335 294
1876	6,106,495	4,693.068	2,225,318

To supplement the above returns and bring the information up to date, the following statements will show the districts traversed by the Caledonian Railway, the output of coal from collieries, and its subsequent distribution for the year 1876:—

Districts.	Quantities—tons.
Lanarkshire	5,829,843
Stirlingshire	44,171
Edinburghshire	38.548
Renfrewshire	6,768
Ayrshire	48,605
Linlithgowshire	104,924
Seaborne coal received at shipping ports for conveyance inland	33,636
Total	6,106,495

(To be continued in next week's Journal.)

NORTH LAXEY.—At the meeting on Thursday (Mr. S. W. Daukes in the chair) the special resolutions for reconstituting the company passed on April 25 were confirmed.

MINING NOTES.—At Wheal Uny the 150 east is improving.—At South Condurrow the West Basset lode, intersected in the 50, north of Plantation shaft, is carrying some tin, and they are continuing the cross-cut north towards the lode. In the 50 west they have driven through a good shoot of tin, but the lode is not so good as it has been.—At North Treskerby they have commenced clearing Kellaway's shaft to make some proof of the fine gossan there.—At Penstruthal there are good indications that the lode will become more settled in a little more sinking below the 88.—At Hingston Down Consols there is a very promising lode in the 172 fm. level east.—At West Godolphin the 70 fm. level, driving south on caunter lode, has improved.—*West Briton.*

WATSON BROTHERS' MINING CIRCULAR.

Ten years ago the weekly information which had previously been published for a great number of years in WATSON BROTHERS' Mining Circular was transferred to the columns of the *Mining Journal*, with the following announcement; which is now reproduced in consequence of the numerous letters and enquiries handed to them of late in reply to one which appeared in the Journal on the Clementina Mine.

WATSON BROTHERS,
MINEOWNERS, STOCK AND SHARE DEALERS, &c.
1, ST. MICHAEL'S ALLEY, CORNHILL, LONDON.

The great extension of mining business, the difficulty so often complained of by country shareholders in getting accurate and disinterested information as to the state of Cornish and Foreign Mines, and of the financial and real position of mining companies generally, have induced Messrs. WATSON BROTHERS to make their Circular now published in the *Mining Journal* more extensively known, and to state—

That they issue daily to clients and others who apply for it a Price List (as supplied to most of the London and country papers), giving the closing prices of Mining Shares up to Four o'clock.

They also buy and sell shares for immediate cash or for the usual fornightly settlement in all Mines dealt in on the Mining and Stock Exchanges, at the close market prices of the day, free of all charges for commission. They deal also, on the same terms, in the Public Funds, Railways, Telegraphs, and all other Securities dealt in upon the Stock Exchange.

Having agents in all the mining districts, they are constantly getting mines inspected for their own guidance, and will also obtain special reports of any particular mine for their clients, for the inspecting agent's fee of £2 2s.

In the year 1843, when mining was almost unknown to the general public attention was first called to its advantages, when properly conducted, in the "Compendium of British Mining," commenced in 1837, and published in 1843, by Mr. WATSON, F.G.S., author of "Gleanings among Mines and Miners," "Records of Ancient Mining," "Cornish Notes" (first series, 1862), "Cornish Notes" (second series, 1863), "The Progress of Mining," with Statistics of the Mining Interest, annually for 21 years, &c., &c. In the Compendium, published in 1843, Mr. WATSON was the first to recommend the system of a "division of small risks in several mines, ensuring the success in the aggregate," and Messrs. WATSON BROTHERS have always a selected list on hand. Perhaps at no former period in the annals of mining has there been more peculiar need of honest and experienced advice in regard to mines and sharedealing than there is at present; and from the lengthened experience of Messrs. WATSON BROTHERS they are emboldened to offer, thus publicly, their best services and advice to all connected with mines and mining.

Messrs. WATSON BROTHERS are daily asked their opinion of particular mines, as well as to *recommend* mines to invest or speculate in, and they give their advice and recommend mines to the best of their judgment and ability, founded on the best practical advice they can obtain from the mining districts, but they will not be held responsible, nor subject to blame, if results do not always equal the expectations they may have held out in a property so fluctuating as mining.

LLANRWST MINES.—A map of this district, coloured and drawn to a scale of 200 fms. to the inch, by Capt. John Roberts, of Llanrwst, may be had in a few days at the office of the *Mining Journal*, or of Messrs. Watson Brothers at 1s. each.

SATURDAY, MAY 11.—Market continues inactive. Van, 19 to 21; D'Eresby Mountain, 80 to 100; D'Eresby Consols, 11 to 13; Tankerville, 4 to 4¼; East Van, 4½ to 5; Great Laxey, 18 to 19; Leadhills, 3⅞ to 4⅛; South Condurrow, 10½ to 11⅛; Grenville, 3¼ to 3¾; Carn Brea, 39 to 41; Dolcoath, 29 to 31; Mellanear, 3⅝ to 4; Devon Consols, 2 to 2⅛; Richmond, 9⅜ to 9⅝; Eberhardt, 7 to 7⅛.

MONDAY, MAY 13.—There is very little change in the general tone of the market, and prices for the most part are almost nominal. Carn Brea, 39 to 41; Devon Consols, 2 to 2⅛; D'Eresby Mountain, 80 to 100, and firm; Dolcoath, 29 to 31; D'Eresby Consols, steady, at 11 to 13; East Van, 4½ to 5; Grogwinion, 3 to 3½; Great Laxey, 18 to 19; Leadhills, 3⅞ to 4⅛; Mellanear, 3½ to 4; Parys Mountain, 8s. to 10s.; Penstruthal, 4s. to 5s.; Roman Gravels, 7⅛ to 8; Rookhope Lead, 17s. to 19s.; Glenroy Lead, 15s. to 17s. 6d.; South Condurrow, 11 to 11½; Tankerville, 4 to 4¼; Tincroft, 10 to 11; Van, 19 to 21; West Chiverton, 10 to 11; West Pateley Bridge, 1¾ to 2⅛; Agar, 3¼ to 4⅛; Grenville, 3⅛ to 3¾; Peevor, 6¼ to 6¾; Wye Valley, 1¾ to 1¾; West Wye Valley, 2¼ to 3¼; Chontales, 10s. to 15s.; Don Pedro, 15s. to 20s.; Eberhardt, 6½ to 7; Flagstaff, ⅝ to ¾; Frontino, 1¾ to 2⅛; New Quebrada, 1¾ to 1⅞; Richmond, 9⅜ to 9⅝; Santa Barbara, 25s. to 30s.; Hultafall, 4 to 5.

TUESDAY, MAY 14.—Market again quiet, and prices about the same as yesterday.

WEDNESDAY, MAY 15.—Market continues very quiet. D'Eresby Mountain, 80 to 100; Van, 19⅛ to 20⅛; D'Eresby Consols, 11 to 13; Great Laxey, 18 to 19; Tankerville, 3⅞ to 4⅛; Rookhope Lead, 17s. to 19s.; Grenville, 3⅛ to 3¾; South Condurrow, 10¾ to 11⅛; Peevor, 6¼ to 6¾; Richmond, 9⅜ to 9⅝; Eberhardt, 6½ to 7; Santa Barbara, 25s. to 30s.

THURSDAY, MAY 16.—Settling day, and the following merely nominal prices, the dealers being busy with the account. Carn Brea, 39 to 41; Devon Consols, 2⅛ to 2⅜; Dolcoath, 29 to 31; D'Eresby Mountain, 80 to 100; D'Eresby Consols, 11 to 13; East Van, 4½ to 5; Great Laxey, 18 to 19; Leadhills, 3¾ to 4; Mellanear, 3½ to 4; Parys Mountain, 8s. to 10s.; Penstruthal, 4s. to 5s.; Roman Gravels, 7½ to 8; Rookhope Lead, 17s. to 19s.; Glenroy Lead, 15s. to 17s. 6d.; South Condurrow, 10¾ to 11⅛; Tankerville, 3⅞ to 4⅛; Tincroft, 10 to 12; Van, 19 to 21; West Chiverton, 10 to 12; Agar, 3¾ to 4⅛; Grenville, 3 to 3½; Peevor, 6¼ to 6¾; Wye Valley, 1½ to 2; West Wye Valley, 3 to 3½; Chontales, 7s. 6d. to 10s.; Don Pedro, 15s. to 20s.; Eberhardt, 6½ to 7; Flagstaff, 20s. to 25s. 6d.; Frontino and Bolivia, 1¾ to 2¼; New Quebrada, 1¾ to 1⅞; Richmond, 9¼ to 9⅜, ex div.; Santa Barbara, 25s. to 30s

FRIDAY, MAY 17.—There is very little business doing, and prices are almost nominal. D'Eresby Mountain, 80 to 100; Van, 19½ to 20¼; D'Eresby Consols, 11 to 13; East Van, 4½ to 5; Tankerville, 3⅞ to 4¼; West Chiverton, 9 to 11; Great Laxey, 18 to 19; Roman Gravels, 7⅛ to 8; Carn Brea, 37 to 39; Tincroft, 10 to 11; Mellanear, 3½ to 4; Parys Mountain, 8s. to 10s.; Richmond, 9 to 9¼; Santa Barbara, 25s. to 30s.

THE WEEK.

SATURDAY, MAY 11.—Although Eberhardts have not maintained the advance made in the early part of the week, they are still 15s. higher than they were last Saturday. During the week Don Pedros, from being 10s., buyers, have risen to 15s., buyers. In shares of the Mercantile Bank of the River Plate the advance has been from 2¼ to 2¾. There has been during the week an advance of 7s. 6d. in Last Chance, from 18s. to 22s. 6d. To-day West Wye Valley shares are offered at 2¼, Wye Valley at 1½, and St. Harmon at 1½. Royal Aquarium shares were firm, at 3⅛.

MONDAY,—Shares of the Mercantile Bank of the River Plate improved to 3/. Don Pedro was rather weaker, and offered at 15s. Port Phillip shares met with considerable enquiry at 12s. and 13s. Last Chance receded to 20s., and Kapanga to 10s. In the foreign market the special feature was the firmness of Egyptian Unified, which rose 1¼, to 33½, being above the price ten days ago before the coupon (3/.) was cut off.

TUESDAY.—A further rise of ¼ took place in Egyptian Unified, to 34¼; Argentine issues, too, were firmer, otherwise the foreigh market was rather dull. Royal Aquarium shares improved to 3¾; this is the highest point, with one exception, reached for two years. A large number are held by members of the Stock Exchange. Brighton, A, was forced up to 131½; Lima Railway, 5 to 5⅛; Bolivar, 4 to 4¼. In mines, Chicago, Aberdaunant, and Van were most in demand. Don Pedro, ⅝ to ¾; Van, 20⅛ to 21; Aberdaunant, 6s. to 8s.

WEDNESDAY.—Shares of the Mercantile Bank of the River Plate improved to 3⅛, and Royal Aquarium rose to 4, while Diamond Rock shares were offered at 1¾. The chief feature in mines was an advance of 10s. in Flagstaff, to 1¾, and 10s. in Richmond, to 9¾. For some little time a large business has been done in foreign mines, stimulated by the low prices at which many of the shares stand. During the week several enquiries have been made for Chicago, Rossa Grande, Rica, Malabar, and other low-priced shares, increased attention meanwhile being paid to Don Pedro, Port Phillip, Last Chance, and Hultafall. Others in which a little business has been done have been Gold Run, Javali, Birdseye Creek, Exchequer, and Kapanga. Roman Gravels, 7¾ to 8; Llanrwst, 2 to 2¼; Denbighshire, 10s. to 15s.

THURSDAY.—The jobbers in the American market continue purchasing the discredited securities of the Atlantic and Great Western Railway in the hopes of palming them off on the public on the revival of business. A very short time back the Third Mortgage bonds were unsaleable at 24, and the First at 826; now the latter are said to be worth over 830, and the other 86, the position of the railway being meanwhile unchanged. Much of the rise no doubt has arisen from the way in which Erie securities have been successfully run up. Great Western Colliery, 2 to 2½. Nant-y-Glo, 17 to 18. Newport Abercarn, 3 to 3¼. Milford Dock, 3½ to 4. South Wales Colliery, 4½ to 5. Mwyndy Iron, 1¾ to 1⅞.

FRIDAY (*Opening*).—Consols for the account are ⅛ higher than last night, and the other markets are firm. Dover, A, shows an advance of ⅛. In mining shares a good business is being done in Don Pedro, Chicago, Pestarena, Panulcillo, and one or two others. Flagstaff rather offered. East Van and Van in demand. Wye Valley, 1¾ to 1¾. West Wye Valley, 2¼ to 3. Hultafal, 4 to 4¼.—*Two o'Clock.*—Russian 1873 has advanced to 79, and Great Eastern to 48⅛. Llanrwst, 2 to 2¼. Minera, 10 to 12. Andrew Knowles, 12½ to 13. Earle's Shipbuilding, 12 to 13. Darlington Iron, 10s. to 20s. John Bagnall, 1¾ to 2. Hopkins, Gilkes, and Co., 1 to 1¾. Pelsall Coal, 2½ to 3. Silkstone and Dodworth, 6½ to 7. West Cumberland Iron, 8 to 8¼. Langdale's Chemical, 4⅝ to 4⅞. Newcastle Chemical, 1 to 1¼. Lawe's Chemical, 7¾ to 8. Flagstaff, ⅝ to 1. Don Pedro, 12s. 6d. to 15s. Chicago, 10s. to 15s. General Credit, 5¾ to 6. Credit, A, 1 to 1⅛.—*Four o'Clock.*—The report of the New Quebrada Company states that ore will be sent over the Bolivar Railway at the commencement of the new year. During the last half-year the expenses appear to have exceeded 18,000/., the receipts being 1925/. With copper at the lowest price touched for 30 years the prospects are not so encouraging as could be desired. West Chiverton, 8 to 10. D'Eresby Mountain, 80 to 90. D'Eresby Consols, 10½ to 11½. Richmond Consolidated close rather weaker. Chapel House Colliery, 3¾ to 3½. Cardiff and Swansea, 10s. to 15s.

FERDINAND R. KIRK.

NEW RIVER SHARES.—At the Auction Mart, Messrs. Edwin Fox and Bousfield offered to auction freehold estates in the New River Company comprising one-fourth of an adventurer's share, one-fourth and one-fifth of a King's share, also 31 new shares and 28 annuities of 2/. 10s. each for 208 years. The adventurer's shares realised at the rate of 93,200/. per share, the King's shares at the rate of 90,000/. per share, the new shares an average of 332/. 5s. per share, and the annuities 63/. each.

Mining Correspondence.

BRITISH MINES.

ABERDAUNANT.—S. Toy, May 15: We have now driven in the 15 fm. level 6 fathoms east on the course of the lode, the lode still producing a little lead, but not sufficient to value. The water in the forebreast is increasing, and the water in the old winze to the east of us is sinking about 1 ft. per week. We have about 11 fathoms more to drive to get under the old 10 fm. level, where we ought to communicate with the 10, by rising 5 fathoms above the roof of the 15 for ventilation, before we sink the engine-shaft deeper.

BEDFORD UNITED.—R. Goldsworthy, William Phillips, May 9: In cutting the trip-plat below the 138 the north and south lodes have almost formed a junction, the horse between them being only a few inches wide. The north lode has a very promising appearance; worth for copper and arsenical mundic 12/. per fathom. No lode has been taken down in the 138 east since last report. The lode in the 115 east is producing saving work. The lode in the 103 east is at present poor. No other change to notice.

BEITWS-Y-COED.—H. T. Haley, May 15: The shallow adit end is looking splendid; worth 1 ton of lead per fathom. In sinking a shaft about 18 fathoms in advance of this end the lode is producing about 12 cwts. of lead per fathom, and looking well; this is in the eastern part of the sett, and in new ground. The deep adit end driving east is now producing good ore, and I think is just getting into the same shoot of ore seen in the shallow adit. As the deep adit end is about 30 fathoms behind the shallow adit, and 50 fathoms from the eastern shaft, it is a very important feature in the prospects of the mine. The engine-shaft and 20 are suspended for the present, in consequence of the drought not having water to keep the wheel going fast enough to drain the mine. This will be avoided in the future, as we are going to put up an engine to meet our requirements in dry seasons. The engineer is here to-day, with our managing director, fixing the site for the foundation of the engine-house, &c., which will be proceeded with as fast as possible.

BLAEN CAELAN UNITED.—J. Pell, May 16: After my report of last week the two lifts of pumps were united into one lift, and one of the patent buckets put in; this work hindered sinking for three days. The engine-shaft is now down 3 fms. 3 ft. below the 20 fathom level. The cross-cut from the bottom of the winze north, in the 30, shows no sign yet of reaching the north wall of the lode; it is advanced 6 ft., in beautiful killas, with branches of lead, and I hope next week to report the full value of the lode, which is wider than I expected. The alterations upon the floorings and surface work are progressing satisfactorily. All other points remain without alteration.

BODIDRIS.—H. Hotchkiss, May 15: Saturday last being the end of our working month, I set the following bargains:—The 60 cross cut to drive south, by four men, at 120s. per fathom, for 2 fms., the men to deliver their stuff to surface and pay other cost; this end is showing more favourable signs of nearing the lode; the forebreast is interspersed throughout with spar and blende, the latter becoming stronger as we advance. The 45 to drive east, on middle lode, by two men, at 17os. per fathom; we have not taken down any of the lode here during the week, as we are driving by the side, so as to ensure speed, but we shall do so in a few days, when I will let you know its character. The two stopes in back of this level are looking better, and the ore breaking in each stope is of a very good quality, and likely to further improve. The stope in bottom of the 30 is equally as good for ore as it was last week, and is turning out good solid lead. The clearing and securing of the easternmost shaft has not been attended with very good speed during the past week, owing to the heavy rain, which has been falling, which has given us abundance of water to contend with, but should the weather settle a little we shall be able to make better progress; re-set to four men and a boy, at 80s. per fathom.

CARGOLL.—J. Jennings, May 16: The 44 cross-cut, south of Bowyer's shaft, is driven 5½ fathoms; it is being pushed on as fast as possible. There is now a very favourable change in the ground, and the breast of the end is getting very wet, evidently showing that we are nearing the caunter lode, where I am looking forward to good results. The 34 east, on the caunter, is a strong flookany lode, and producing a little saving work for lead, and from its promising appearance believe it will not fail to improve as we advance eastward. The 34 west is very much improved, now producing some very good stones of lead, and have no doubt ere long to see a great improvement in this direction. The stope in the back of the 34 west is fallen off in value, now worth 3/. per fathom. There is no change elsewhere worthy of note since my last report.

CLEMENTINA.—Wm. Bennetts, J. Roberts, May 15: The stope in the back of the deep adit is still looking kindly, and worth about 15 cwts. of lead per fathom. We strongly recommend the driving of the 15 end north as there is there a kindly lode, and in whole ground to surface; this end has passed through good bunches of lead, which have been taken away at a good profit, and we have reason to believe that if continued it will pass through similar bunches. We have a long piece of virgin ground, and cannot fail to be productive.

CLOGAU.—W. B. Davies, April 30: The stope on the branch lode has continued to produce good visible gold; there is no change to report in this part of the mine. No. 7 has continued to improve; we are now obtaining remunerative rock from this place. We are now putting pumps down No. 5 shaft, and erecting windmill; we expect to have the water out before the end of May.—Reduction: The Britten pans worked 448 lbs. of ore, which produced 46 ozs. 17 dwts. 10 grs. of gold.

COMBMARTIN.—J. Comer, May 16: In the 28, driving west of Knights's cross course, the lode will average 5 ft. wide, of capel, quartz, and white iron, intermixed with lead, blende, and mundic throughout. In the 15 fm. level, driving east of Harris's shaft, the lode is 4 feet wide, composed of killas, quartz, and seams of lead. In the adit cross-cut, driving north, the ground is of much the same character as for some time past.

DE BROKE.—J. Phillips, May 15: We have sent down and completed a sinking-lift at Wilson's shaft, and I expect to make satisfactory progress at this point. In the 45 east there is no change, and the same remark applies to the 35, on the north part of the lode. The stope in back of the 35, west of rise, is worth from 10/. to 12/. per fathom. A stope in back of the 25 is worth 7/. per fathom, and two other stopes in the same level 8/. per fathom. Dressing ore for the next sampling, and work generally, is being steadily pushed on.

D'ERESBY CONSOLS.—J. Roberts, W. Bennetts, May 15: The end driving south on the Gorse heading is looking very kindly. The lode is strong and well-defined, composed of quartz and carbonate of lime, having large vughs, which scarcely ever fail to produce lead. The end on Owen's lode is very much improved. It has now opened out to 2 ft. wide, and contains good stones of blende. The importance of this change is enhanced by the approach to the extensive workings at surface. The clearing of the shallow adit is progressing very satisfactorily. We shall soon clear forth to Owen's shaft, when we hope to be able to draw out the water, and commence sinking on the course of lead said to be there.

D'ERESBY MOUNTAIN.—Wm. Bennetts, J. Roberts, May 15: No. 5 adit is progressing favourably. We have about cleared the run near No. 2 shaft. We think that after we have completed this we shall have many fathoms clear beyond the shaft The lode in No. 4 adit is without any change since last week. No. 3 end is improving, and producing good stones of lead. We hope shortly to be able to report something good here. We shall start the driving of No. 1 forthwith. The builders are making steady progress with the crusher-house. The wheel pit has already been completed.

DENBIGH CONSOLIDATED.—R. Prince, Abel Francis, May 15: Parry's Workings: Very fair progress has been made in driving the bottom level from the old sump, and we have had pleasure in noting a gradual improvement both in the character of the lode, and also in the lead stuff raised therefrom. We look forward with confidence to this operation, from which we are likely to realise good returns. From the rise in the roof of this level we have also been getting good lead. In the 112 permanent level west we have to notice an improvement, and there is every appearance of our having a good body of ore before us. The tributers are also turning out some fair quality stuff. Good progress is being made in sinking the sump from the bottom of the 66 level west, and we purpose, after going a few yards deeper, driving out on the course of the lode and opening up for stoping the bad ground that we have now been passing through for some time. The results we are very sanguine about. A further good discovery may also be looked for, seeing the extraordinary character of the ground we have at this part of the mine. We are now about in the centre of the Park, and judging from what we now have in sight, and the general appearance of the surface, there is reason to expect a great deposit of ore. In the 112 east rise we shall draw to surface to-morrow some good lead stuff for the washing-floor.

— May 18: Yesterday the men got some capital lead from the forebreast at Parry's on the course of the lode.

DERWENT.—J Morpeth, May 16: Jeffries' Shaft, Middle Vein: The 95 east is as for some time past, and the stopes, &c., following are yielding 15, 16, 16, 20, and 20 cwts. of ore per fathom respectively; average width of vein, over 6 ft. The 93 west has increased to 3 ft. in width, value still 10 cwts. Over this level the respective worth of the stopes is 12, 24, 12, 12, and 22 cwts. of ore per fathom, the vein averaging 4 ft. in width.—Sun Vein: This vein in the 70 west is 1 ft. wide, but poor. The stope in the back being poor also, we have suspended it. The 70 east is 2 ft. wide, and worth 12 cwts. of ore per fathom, and the stope in the back yields 21 cwts. of ore; the vein is 3 ft. wide. The stope under the 40 continues poor.—Westgarth's Shaft, Middle Vein: The 93 east, because of its extreme hardness, is now being turned into the lode again, and in a few more days we shall be able to give you its value. The stopes over the 74 are yielding 11 cwts. of ore each per fathom; the vein is 2 ft. wide. Machinery all working well.

DUBBY SYKE.—W. Tallentire, May 10: Dubby Syke Level: The shaft we are sinking from the surface to meet the rise is nearly through.—Outside: We have cut the water-course to convey water to the dressing-floors.

EAST CHIVERTON.—R. Southey, May 14: Since the last general meeting of shareholders we have communicated the rise in the back of the 74 to the 64, west of the engine-shaft. We have been much longer doing this than I at first anticipated, in consequence of the wetness of the ground, and impurity of the air; we have now good ventilation for working in the bottom level. The 74 end, west of shaft, is being driven by six men, at 3/. 10s. per fathom; lode 4 ft. wide, producing stones of silver-lead ore, and judging from present appearances of the lode I am of the opinion we shall meet with other shoots of lead in our additional ground going west towards West Chiverton. Through the suggestion of a large shareholder we tried to sink in the bottom of the 74 by manual labour, just to prove the shoot of mineral going down, but found the water too much; it is, therefore, abandoned. The lode as far as could be seen looks remarkably well, and produced some very rich lead ore. During the past four months we have driven the 64 cross cut, south of engine-shaft, about 5½ fms. The main lode is not yet intersected, although we have met with several branches of a highly mineralised character; present price for driving, by four men, 12/. per fathom. Seeing that the lode in going down level after level from the 25 to the 74 has improved in value, I consider the shaft should be sunk to the 84, but before incurring this expense I would advise first to see the south lode intersected in the 64 cross cut, this being one of the lodes that made such immense riches in the adjoining mine. In adopting the above named course our cost during the ensuing four months will not exceed the past, and at the same time after the south lode is intersected, and the bearing taken, we shall be able to judge better what angle to sink our engine-shaft.

EAST VAN.—William Williams, May 16: Tempest Shaft is going down rapidly. There is a good drop of water in it now, as it drains the lode. We are pushing forward the 55 fm. levels; the eastern end continues to show spots of lead, and the western has very much improved to-day, being now the best end we have seen in this level at all.

EAST WHEAL LOVELL.—Richard Quentrall, May 15: We have not yet met with the lode in the 80 cross-cut north at Fatwork, but it is now letting out a little water, and the ground is rather more favourable. In the south ground the engine is working very well, and we are now in full course of sinking on two of the lodes. The south lode is 18 inches wide, containing a little tin throughout. The lode in the north shaft has been small in the western end of the shaft for the last few days, but eastward we have a large lode, which appears to be making back in the shaft, and is producing good stones of tin.

GAWTON COPPER.—George Rowe, George Rowe, jun., May 11: The lode in the 82, west of cross-cut, is carried 6 ft. wide, producing very strong mundic, spotted with ore. The lode in the 95 east is producing mundic and ore to the value of 8/. per fathom. The lode in the winze, sinking below the 105 east, is worth 30/. per fathom. The lode in the stope in the back of the 105 is worth 20/. per fathom. All other points are without change.

GLASGOW CARADON CONSOLS.—W. Taylor, W. J. Taylor, May 14: The sinking of Elliott's shaft below the 90 is progressing favourably; no change in the nature of the ground. In the 90 west the ground is favourable; lode worth from 10/. to 12/. per fathom. The 90 east is still rather slow for progress, about the same value as last reported—15/. per fathom. We intend to put out a cross-cut further south at this level; we think there are other lodes in this direction. The winze sinking in the bottom of the 78 is worth 12/. per fathom. In the 78 east the lode is large, of the same kindly appearance for ore and mundic, but not yet of much value. The 78 west, on south lode, is worth 10/. to 12/. per fathom, in favourable ground for working. The lode in the midway east is looking very promising, and we are hoping it will strike into ore of value. The stopes and pitches throughout the mine are looking well, fully equal in value to the last report. All the surface and other work is being pushed on as fast as possible. We sampled yesterday (computed) 240 tons of copper ore, for sale on the 23rd inst.

GLENROY.—R. Rowe, May 15: The shaft is again fairly under way, sinking below the 80, and I have to day set it to twelve men, at 20/. per fathom for the month.

GORSEDD AND MERLLYN CONSOLS.—W. Edwards, May 16: We are making very satisfactory progress in sinking the new shaft, and by Saturday we expect to have sunk 6 yards out of the 20. The driving of the western level is being urged on, and there are appearances as if the lode would open out shortly into softer ground. The tributers are making fair wages, and on the dressing floor the lead and blende are turning out as well as I expected.

GREAT DYLIFFE.—Evan Evans, May 15: The stope under the 95 east, on Dyliffe lode, is still good; worth about 25 cwt. per fathom. The stope No. 1, over the 95, is a little better than last week; worth about 14cwts. per fathom. The stope No. 2 is still looking poor. The stripping at the 95, east of stopes, is not in paying ground, and is suspended. The driving and stoping at the 20 is looking well, a little better than last week. The stope on new lode is yielding nice stones of ore, but not enough at present to pay, and will be suspended to-morrow. The stopes over the 105, east of Bradford's shaft, are much poorer than when last reported, not in payng ground at present, and, consequently, are suspended. We have very nice ore in the bottom of this level, and we are making preparations to go under it.

GREAT HOLWAY.—May 16: The lode from the Level engine-shaft east seems undergoing a gradual and permanent improvement, and there is every reason to expect that ere long we shall have an increasingly productive lode at this point.—Roskell's Shaft: The boring machinery has arrived, and we are working hard to get it erected and started, as there is nothing now to prevent a continued sinking of this pit, which is one of the most important points for the future of the mine.—Freehold, Office Shaft: I am glad to say the tributors are getting good lead and blende ore, and there is every prospect of a further improvement. We are taking the necessary steps to urge on operations at Partridge shaft, and I expect you will have reason to be satisfied with the progress we shall now make in every department. Our prospects are undoubtedly very good.

GREAT RETALLACK.—T. Harris, May 11: We have resumed working in the 57 fm. level; the lode is cut into about 2 ft. in the back of the level nearly all solid blende, and as it is underlying rapidly I have placed four men to strip down the south side of the level—it also appears to be going back towards the shaft as well as on towards the end, and so far as seen it is worth fully 3 tons of blende per fm. The lode in the 53 east is at present only producing patches of blende, the lode having been disordered by a bar of hard ground, but the ground in the end to-day is more congenial for blende, and I am, therefore, hoping for an improvement again shortly. The lode in the stope above the 53 is yielding fully 3 tons of blende per fathom.

GREAT WHEAL RODD.—T. F. Hosking, May 15: We have intersected the lode in the deep adit; the same has been cut into about 2 ft., from which we have broken several rich stones of lead ore, and the lode generally is composed of everything that could be desired for the production of lead in large quantities, and is of no ordinary character, even better than we expected to find it at so shallow a point. It is early yet to know anything of the extent of the lode, but more will be seen of it when cut through and driven on its course; present appearances are most satisfactory, and energetic efforts are being put forward to cut through the lode, and extend the drivage where good depth will be obtained, and further improvements made.

GREEN HURTH.—W. Vipond, May 10: There is no material change in the new vein, west of No. 1 cross-vein; it is still bending northward. We have commenced working the sole of the third branch, west of No. 1, having finished the stope; this is yielding 8 cwts. of ore per fathom. We have also left off working the side of the east branch; we are now working the stope above, which is yielding 16 cwts. of ore per fathom. The stope in waterway is yielding 8 cwts. of ore per fathom. The sole of the adit level continues to yield about 5 tons of ore per fm. There is no change in the cross-cut west from the north level. No. 3 cross-vein is unusually soft and easy for driving at present, but yields no ore. We finished the delivery of a wagon of ore to-day—7 tons 4 cwts.

HARWOOD.—W. Tallentire, May 10: Herdship Level: We have this week intersected an east and west vein in driving No. 2 north end; we have not yet cut through it, but as far as I can judge at present it seems a strong vein. In the south end there is no change to notice.

HINGSTON DOWN CONSOLS.—T. Richards, May 9: Bailey's Shaft: In the 172 east the lode is improving, containing capel, quartz, mundic, and copper ore, and is worth 15/. per fathom. I have never seen this lode more promising than at the present time. The stope in back of this level is worth 18/. per fm. In the 160, west of Nicholls' winze, the lode has a very promising appearance, worth 6/. per fathom.

KIT HILL.—H. Bennett, May 16: There is no change in any of the points in the south part of the tunnel. In the north part of the tunel, driving south, we are meeting with small branches of arsenical mundic, and the water is very much increased. We think we are getting near a lode.

LADYWELL.—Arthur Waters, May 16: In the winze below the 16 south the lode is worth ¾ of a ton lead ore per fathom, there being good ore ground in both ends of the sump. The new shaft is about 3 ft. below adit, and the lode is yielding good lumps of ore. The 20 fm. level, south of said shaft, is opening tribute ground. The rise in this level, about 5 fathoms south of the shaft, is worth 2 tons per fathom in soft ground. We have to-day sampled 25 tons lead ore, for sale next week.

LEADHILLS.—A. Waters, May 16: My monthly reports on the mines, inserted regularly in the Journal, have given a full account of the various points under development during the last half-year, and to go into elaborate details again on the past would involve a repetition which would tire your patience, and, therefore, lead to no good purpose. I prefer to give a list of the settings for May, copied in regular order from my underground measuring book, and then fill up my report with remarks on the numerous trial points considered to be of importance, and likely to result in discoveries which will enhance the future prosperity of the mines.—Jeffrey's Vein: Gripp's adit to drive north-west from Rake vein, at Reid's shaft, by four men, at 120s. per fathom and 10s. per ton, is yielding small pieces of ore. This level is going forward towards some old workings, that yielded very considerable quantities of lead ore from surface down to Faultshield adit, and is looked upon as a first-rate trial. No. 1 stope in the back of this level, by four men, at 60s. per fathom and 20s. per ton; lode worth 18 cwts. of lead ore per fm. No. 2 stope by four men, at 20s. per fathom and 20s. per ton; lode worth 3 tons per fathom.—Rake Vein, Reid's Shaft: New trial shaft from surface, north of Reid's, by two men, at 30s. per fathom and 3s. per ton: a large fine looking lode, yielding good stones of lead ore. This discovery is to the north of all the workings on Raik vein at Reid's shaft; John Brown and boy. Four men preparing to sink No. 2 winze below the 10 in rich ore ground. The men are cutting winze-plat, and will commence to sink in a few days. No. 1 pitch in the back of the 10, south of said winze, by four men, at 7s. per ton of dressed ore; lode worth 8 tons per fathom. No. 2 pitch, north of the winze, by four men, at 13s. per fathom and 7s. per ton; lode worth 6 tons per fathom. The stope in the back of the 10, north of No. 1 sump, by four men, at 35s. per fathom, and 7s. per ton; the lode is worth 2 tons per fm. Pitch in back of Gripp's, north of Jeffrey's cross cut, by three men, at 110s. per ton; getting good wages. No. 2 pitch, north of ditto, by four men, at 110s. per ton; getting ore to pay.—Highwork Vein: Gripp's adit to drive south of junction, south of Reid's shaft, on said vein, by four men, at 80s. per fathom and 10s. per ton. We can see the old men's workings in the roof of this level, and of course the water is drained down to that point. We are getting good stones of ore out of the lode here, and from what we can see in the bottom of the old mine, it is likely that good ore ground will be met with shortly. Gripp's adit, north of Jeffsey's cross-cut, by four men, at 90s. per fathom. We expect to hole into old workings here soon. Watson's shaft from surface to come down into Highwork and Raik veins in the old mine, by nine men, at 16/. per fathom.

Brown's Vein: The 55 fm. level, south of Jeffrey's shaft, by four men, at 7/. per fathom; lode yielding stones of ore, and likely to greatly improve soon. Stope in back of this level, north of Brown's winze, by four men, at 40s. per fathom and 10s. per ton; lode worth 40 cwts. per fathom. The stope in back of ditto, south of the winze, by four men, at 45s. per fathom and 10s. per ton; lode worth 42 cwts. per fathom. The rise in the 55, north of shaft against Gripp's winze, by four men, at 6/. 10s. per fathom; strong lode, with stones of ore. Gibson's winze, below the 40, by four men, at 8/. 10s. per fathom and 10s. per ton; strong lode, with stones of ore. The 40 north by four men, at 8/. 10s. per fathom; wide, good-looking lode, but not to value. The pitch in the 30, south of shaft, by two men, at 110s. per ton. Gripp's adit, south of Jeffrey's shaft, by two men, at 5/. 10s. per fathom and 10s. per ton; this end is going forward towards old workings which yielded considerable qualities of lead ore, and were, it is said, suspended in good ore ground. The pitch in back of this level by four men, at 110s. per ton.—George's Roust Vein: Gripp's adit, to go north of Muir's main cross-cut on the above lode, by four men, at 70s. per fathom and 10s. per ton; fine-looking lode, yielding rich lumps of galena, carbonate, and phosphate of lead. This end is going towards old workings which yielded ore from surface downwards to a depth of 23 fms. above Gripp's, and for a length of about 200 fms. This is evidently a splendid trial, and one likely to lead to great results.—Brow Vein: The stope in back of the 60, south of Glengonar shaft, by two men, at 40s. per fathom and 10s. per ton; lode worth 20 cwts. per fathom. The stope in bottom of the 40, north of shaft, by two men, at 45s. per fathom and 20s. per ton; lode worth 25 cwts. per fathom. The 30 cross-cut, north of shaft, to go east to side lode, by four men, at 8/. 10s. per fathom. The 20 cross-cut, south of shaft, to go east to side lode, by two men, at 8/. 10s. per fathom. The pitch in this level, south of shaft, by two men, at 110s. per ton. The rise in the 20 north, against Moffett's winze, by four men, at 9/. per fathom; worth 5 cwts. per fathom. Moffett's winze, below Gripp's north, by four men, at 6/. 10s. per fathom; lode yielding good stones of ore. There is a good section of ore ground in each side of said winze for 11 fms. deep below Gripp's. Gripp's adit, north of shaft, by four men, at 120s. per fathom and 10s. per ton; lode not to value. Drifts above Gripp's, north of Muir cross-cut, by four men, at 4/. 10s. per fathom and 20s. per ton; worth 20 cwts. per fathom.—Muir's Cross-cut towards West Lodes: Gripp's, west of Glengonar shaft, by four men, at 9/. 10s. per fathom; this cross-cut is now about 99¼ fms. from shaft, and to within 20 fms. of the first side lode of importance and 65 fms. of No. 2; rich lead-producing lode.—Carne's Vein: The pitch in Gripp's adit, north of Brown's lode, by three men, at 100s. per ton; lode yielding good quantities of ore. There is little done on the vein below adit, and the chances are that a good mine will be found upon it. We shall make a trial in the ore ground below adit forthwith.—Mill Vein: The pitch in back of Gripp's, south of Muir's shaft, by two men, at 100s. per ton; men getting good wages.—

Glenca Vein: The adit cross-cut towards said vein, by two men, at 53s. per fathom. The indications point to the near approach of the end to the lode we are in search of. It will be seen by the foregoing that in addition to the present lead-producing points on the different lodes, there are several most important trials in hand which are likely to lead to as great results as any hitherto met with in Leadhills. In such an extensive field, and with so many lodes untried, it would be idle to talk of exhausted mines, especially with the data which these mines can supply for hundreds of years past. I have faith in the points now being pushed in search of discoveries, and only hope that a speedy improvement will take place in the metal market to enable us out of large returns of ore to make fair profits. Quantity of broken ore undressed up to the 11th inst., 244 tons 1 cwt.; raggings and slimes partly dressed, 130 tons; dressed on hand, 204 tons 12 cwts.: total, 578 tons 13 cwts. Lead in pigs, 80 tons; slags and fume, 20 tons: total, 100 tons, exclusive of royalty.

LIVINGSTONE CONSOLS.—Wm. Vivian, May 16: In the 30, driving west from the north shaft, the lode is 6 ft. wide, producing good stones of copper and tin. I consider that the prospects presented by the lode are decidedly more encouraging as we advance.

LLAN-GAN.—W. Michell, May 15: Engine-Shaft, South Cross-cut: In the last 6 ft. driving a change in the ground has taken place; we have had branches of spar and spots of lead ore; we are now at the point to intersect Burt's lode by the bearing of Smith's lode at surface; we expect to cut it in the cross cut within the next 4 fms. In the 20, driving west on Wright's lode, the lode is still strong and masterly—a very promising lode.—Old Engine-shaft: Our tribute pitches east and west of shaft are producing about the same quantity of ore as for some time past. We are blasting down the south part of the lode that has been left standing west of shaft, and good ore is being broken from it that will pay well. Taking the general appearance of the mine, together with the results we are now deriving, I have not seen our position and prospects in so favourable a condition as they stand at present, and I look with pleasure on the steady but continual progress we are making. All our machinery is in good order, and the dressing-floors in full work.

MARKE VALLEY.—Wm. George, James Stenlake, May 16: Fair progress is being made in driving the 90 west, with but little alteration in the lode to notice; it is still composed of spar, spotted with copper ore and mundic. The driving of the 90 west is continued by the side of the lode. In the 10 west the lode is still yielding full 3 tons of good quality ore per fathom; the driving of this level has lately opened out some profitable ground, which will become available for stoping when a communication is made with the rise from the 20; this we expect to accomplish within a month from this time. Our pitches and stopes are just the same as reported at the last setting.

MEDLYN MOOR.—Joseph Prisk, May 13: Enclosed I beg to hand you cost-sheet for four weeks, ending April 20, and is due to be paid on Saturday the 18th inst. You will observe the pay is about 20*l.* more than last, owing to our having six additional men rising in the back of the 27, against the new shaft. We hope to effect a communication with the 27 by Saturday, after which we shall be in a position to sink below, and have six men from the rise available for sinking for the north lode. Everything is being carried on as reported at the last meetiug, and good progress being made, as we expected.

MELLANEAR.—May 15: The lode in the 40, west of skip-shaft, is 2 ft. wide, and worth ½ ton of ore per fathom. The stope above the 67, east and west of No. 1 rise, is worth 6 tons per fathom. The stope in the back of this level, east of No. 3 rise, is worth 4½ tons per fathom. The stope in the bottom, west of the cross course, is still worth 7 tons of ore per fathom. The ground in Gundry's shaft is without change, and our progress in sinking has been quite as good as usual. The lode in the 90, west of Gundry's shaft, is 4 ft. wide, producing a good deal of mundic, and some good stones of copper ore. The lode in the 80 west is 3 ft. wide, and worth 2½ tons per fathom. The lode in the stope in the back of this level, east of shaft, is now worth 6 tons per fathom. The lode in the 70 west is 3 ft. wide, and worth 2 tons per fathom, and the ground is very much better for driving. The stope in the back of this level, east of shaft, is worth 4 tons per fm. The lode in the 60 west is 4 ft. wide, and still worth 4 tons per fathom. The lode in the winze in the bottom of this level is worth 3½ tons, and the rise in the back of this level is worth 3 tons per fathom. The lode in the 50 west is 4 ft. wide, and worth 3 tons of ore per fathom. No. 2 rise in the back is worth 5 tons per fathom. The lode in the 40, west of No. 1 rise, is 5 ft. wide, and worth fully 5 tons of ore per fathom. We have commenced the 100, west of skip-shaft, by six men, at 8*l.* per fathom; there is no lode in the end at present, but we think by gaining north a little in the course of driving that we shall soon intersect it. There is no change in any of our other bargains since last report. We expect to sample on Tuesday about 385 tons of copper ore.

MONYDD GORDDU.—J. G. Green, May 15: Owing to the recent heavy rains we have plenty of water for all purposes, and the mine is in fork, and sinking resumed with vigour. The 12 west continues worth 2 tons of lead per fathom; ground not so good for progress. In the 12 cross-cut there is a change in the character of the ground, and we have now in the drivage a nice branch of ore, which I take to be a feeder from the lode we are in search of, and is a very favourable indication. No change in any other part of the mine to notice. Surface works have not progressed so well during the week owing to rain.

MORFA DU.—T. Mitchell, May 15: Everything is in good working order here, and good progress is being made in driving in the bottom level. The end is now in 4 fms. 3 ft. from shaft. If the ground continues favourable for driving we shall soon get into the bluestone deposit.

NEW SOUTH MERLLYN.—R. Rowlands, May 16: The 80 south looking about the same as last reported. We shall have nearly 6 tons of ore ready by Saturday.

NORTH LAXEY.—R. Rowe, May 15: The lode in the 84 end driving south is getting larger; now 18 in. wide, and worth from 6 to 8 cwts. lead per fathom; the appearances of the lode strengthen my expectations that we shall open out some good ground as we drive southwards, and as soon as it can be afforded I should like to start a winze in the bottom of the 70, about 20 fathoms ahead of the present 84 end, as I believe it would quickly open out a large piece of productive ground, as well as reveal what may be expected from driving the deeper levels south (below the 85), and if encouraging. The mine after long perseverance in sinking is in excellent position to get at the productive ground rapidly by the driving of successive levels below as deep as the 146. The 60 and 96 stopes are improved, and worth fully 15 cwts. lead per fathom on an average.

PARACOMBE.—C. H. Maunder, May 16: In the drivage east we have intersected a cross-course 4 ft. wide, composed of blue killas, flookan, mundic, and silver-lead. Between this point and the opening made in the back of this lode we have from 20 to 30 fms. on the line of the lode, where it is very rich for silver-lead only a few feet from the surface. Sinking on the course of the lode west is progressing very satisfactorily, the underlay is regular, and a strong masterly lode going down, being composed of quartz, barytes, mundic, copper, and silver-lead, which continues to improve every foot we go down. No. 5 lode remains about the same as last reported on. The advantages for driving on the course of this lode are remarkably good, as backs will be gained of about 35 to 40 fms. On breaking over a portion of this lode I find it to contain good spots of silver intermixed with lead.

PARYS MOUNTAIN.—T. Mitchell, May 15: The ground in the 90 south is getting a little better for driving, and we have a strong feed of water coming from the forebreast, which we think must be coming from a lode not far ahead. It is a good indication to see more water issuing from the ground. The 90 west is still in lodey ground all the width of the end, and yielding a little copper ore and sulphur.

PATELEY BRIDGE.—C. Williams, May 16: The rake vein in the 30 east is 6 ft. wide, and worth 4 tons of lead ore per fathom; ground moderately easy. The same vein in the 30 west is 6 ft. wide, and worth 1½ ton of lead ore per fathom; ground rather tight. The vein in No. 1 stope, in the back over the 30 east, is without change; worth 1 ton of lead ore per fathom. The vein in the rise and stope in the back of ditto, 20 fms. east of engine, has inproved; worth at present 1½ ton of lead ore per fathom. The vein in No. 1 winze, in the 20 west, is 4 ft. wide, and worth 1 ton of lead ore per fathom. The tribute pitches are without change this week. All machinery in good repair.

PENNANT.—May 16: The men are making satisfactory progress in driving the 133 yard level east and west. In the western level we shall not be long before reaching underneath the sump sunk some time since from the bottom of the 80, which is said to be in good mineral ground. Water is issuing freely from the lode, and I look forward with confidence to cutting into one of the runs of ore proved in the upper working. The cross-cut at the 80 is making fair progress. The stopes continue to yield as heretofore, and are now sending off fair quantities of mineral to the station.

PLYNLIMMON.—J. Garland, March 15: The new shaft has been let to six men to sink below the 36 fm. level, at 20*l.* per fathom, or 30*l.* for 9 ft., when bearers and cistern must be put in, and a trip-plat cut. The driving of the 36, east of Herbert's winze, has been let (for one month only) at 7*l.* per fathom: this end shows an improving lode, and worth from 10 to 12 cwts. of ore per fathom. Two stopes over this level, east of Herbert's winze, have been let to 12 men at 8*l.* 18s. and 4*l.* per fathom respectively; average value for the whole length about 15 cwts. of lead ore per fathom. A stope has also been let to six men in the sole of the 24, about 40 fms. east of new shaft, at 8*l.* per fathom; also a stope in the bottom of the same level, east and west of Herbert's winze, to eight men, at 4*l.* per fathom; value of these new stopes will be given next week. We have a good supply of water, and the drawing of stuff and surface operations in general are progressing fairly well. Offers for 20 tons of lead ore, sampled on Tuesday, are due on May 21. The machinery throughout the mine is in fair working order.

PRINCE OF WALES.—J. Andrews, May 15: There is no change in the lode in the deep adit west of Vigar's shaft, which is still small and poor.

ROMAN GRAVELS.—A. Waters, May 16: The 65, south of new engine shaft, is worth 2 tons per fathom. The 80 south is worth 4 tons per fathom. The 95 south is worth 3½ tons per fathom. The plat in the 110, of new shaft, will be finished some time this month, and the level started north and south on the Roman lode in ore ground. The stopes throughout the mine are yielding good quantities of ore, quite equal to the output for a long time past. We have to-day sampled 180 tons of lead ore (four weeks), for sale next week.

SAINT PATRICK.—William Francis, May 15: The 120 yard cross-cut north I am glad to report still progresses with the most favourable appearances. The wall is still well defined on the heading side of the cross-course, which has fine boulders of white limestone and tuffy, mixed with clean spar and a little lead ore, all embedded in a fine matrix. The 60 yard cross-cut in the chert also looks promising for a vein, the east and west partings having been lately intersected, the measures being of the best bearing kind.

SOUTH CONDURROW.—W. Rich, W. Williams, H. Abraham, May 15: The lode in the 93 end east is worth 6*l.* per fathom. The 93 west is worth 9*l.* per fathom. The 80 east is poor. The 70 west is worth 10*l.* per fathom, and the lode looks likely to improve. The 50 west is worth 10*l.* per fathom. The 50, east of cross-cut, yields stones of tin. The rise in the back of the 50, at middle cross-cut, is worth 7*l.* per fathom. The 50, east of King's, is worth 9*l.* per fathom, and the lode looking very promising to improve. The 40 east yields low quality tinstone. The 40 west is worth 9*l.* per fathom. The ground is easy for driving the 30 cross-cut north. We are cutting down and enlarging the Plantation shaft below the 50, and are pushing on the 50 cross-cut, north of this shaft.

SOUTH DE EREESBY MOUNTAIN.—T. Bennetts, May 15: We have cleared No. 1 adit to the end driving north; about 2 fathoms behind the end the former workers mined the lode. We shall now cross-cut east, where we believe the lode will be found. There is no change in the cross-cut driving east to cut the large lode since last report.—No. 1 Adit: I am pleased to tell you that No. 1 lode is looking much more promising to-day than I have ever seen it before; the lode is 2 ft. wide, producing some good lead.—No. 3 Adit: We are busily engaged in clearing this level driven on the Cwm Lanarch lode, where it is said by the old men that there is a good lode. I am glad to tell you that we have cleared up the shaft to the bottom that has been sunk on the large lode; there is good lead to be seen in the bottom of the shaft, also in each end of the shaft. The mine is looking well.

SOUTH MOLTON CONSOLS.—J. Harris, T. May, May 16: Fair progress is being made with the drivage of the adit level cross-cut; the level is wholly in shelf now, and we are hoping every 6 ft. driving will bring us into more settled country, in which we hope to meet with lodes of value, which are known to traverse the south ground.

SOUTH ROMAN GRAVELS.—May 16: Shelve: There has been no particular change in either of the ends driving north at the deep adit cross-cut during the past week.

SOUTH TOLCARNE.—W. Rich, J. Knotwell, May 15: We have pumped out the water at the flat rod shaft, on the copper lode, and have cased and divided the shaft below the 24, and shall now begin to drive the 36 east, and the 24 west. There is water in the Boundary shaft, which prevents the sinking.

TANKERVILLE.—A. Waters, May 16: Watson's shaft is now 12½ fms. below the 192; ground as for some time past. The winze below the 192, west of shaft, is down 10½ ft. in a lode 8 ft. wide, worth 1½ ton per fathom. The 192 west is into a point where the lode is in two divisions, the present value being 1¼ ton per fathom. The three stopes in the back of the said level west are worth together 5 tons per fathom. The winze below the said level east of shaft, is down 4 fms. 2 ft.; lode worth 2 tons per fathom. There are indications of an improvement in the lode in depth here. The 192 east of this winze, east of shaft, is split up into branches; at present the lode is worth ¼ ton per fathom. The three stopes in this level east of shaft are worth together 5½ tons per fathom. The 120 west of shaft (a pioneer level) is into a lode worth ¾ ton per fathom; ground wet. We have nine pitches, and shall set two or three more shortly. Our usual sampling takes place next week.

TEMPLE.—May 14: There is no particular change to notice in any of the different points of operations, except that the lode in No. 3 end appears to be producing rather more lead than when reported on last week; generally the mine looks particularly well, and its prospects for the future are encouraging; a continuation of its present produce is all that is necessary to ensure the success of the company. Preparations are now being made at surface to bring in the necessary water from the River Rheidol to work a powerful water-wheel for crushing and dressing the lead ore, the tramway from No. 2 level to the proposed dressing-floors having been completed.

TOLGUS CONSOLS.—W. C. Vivian, May 16: In the 40, west of cross cut, on the south lode, the leader on the south wall has increased to a width of 6 in., and contains a larger proportion of very nice looking quartz, better than we have ever had before in this lode, its composition in addition to the quartz consisting of chlorite or greenstone, blende, and copper ore, the latter in rich patches. The rock forming the south wall is very green, and I have, therefore, ordered it to be blasted down for a foot or two south of the leader to ascertain whether there may be more lode in that direction. In the 40 cross-cut, north from engine shaft, the rock continues favourable in character and for progress. The distance driven is now about 25 fathoms, leaving probably 5 or 6 fathoms more to drive to reach the lode.

TREBEIGH CONSOLS.—J. Gifford, May 14: In the 45, south of engine-shaft, the branch appears to be improving in size, and lets out more water than we have seen since we commenced driving it, and also looks promising to prove a regular north and south lode: the end is now 16 fathoms from shaft. The trial shaft on the Ruby lode is down 10 fms. 1 ft., the lode being 3½ ft. wide, chiefly composed of capel, quartz, and peach with occasional spots of arsenical and sulphuric mundic and lead ore intermixed. The ground is favourable for sinking.

TRELEIGH WOOD.—Wm. Goldsworthy, May 9: Saturday being our pay and setting day, the following bargains and pitches were set. To rise in the back of the 44, west of engine-shaft, by six men, at 4*l.* 10s. per fathom; stent 5 fms.: the lode is worth 6*l.* per fathom. To drive the 34 west by four men, at 4*l.* per fm.; lode worth 5*l.* per fathom; this end is showing every sign for an improvement. To rise in the back of the 34 east by two men, at 3*l.* 10s. per fathom; lode producing stamping work.—Tribute: No. 1 pitch in the back of the 44 west to six men, at 11s. in 1*l.* No. 2 pitch in the same level to four men, at 12s. in 1*l.* A pitch in the back of the 44 east to ten men, at 10s. 6d. in 1*l.* A pitch in the back of the 34 east to five men, at 11s. 6d. in 1*l.* A pitch in the bottom of the 34 east to four men, at 11s. 6d. in 1*l.* A pitch in the back of the 34 west to five men, at 8s. in 1*l.* A pitch in back of the same level to two men, at 10s. 6d. in 1*l.* The men to be paid 35*l.* per ton of black tin, instead of 33*l.* as before. There has been nothing done in the 56 or the winze below the 44 since we commenced to repair the boiler, as one boiler is not sufficient to keep the water below the 44; this we are forcing on as fast as the nature of the work will admit.

TYN Y FRON.—E. Jones, May 14: Since my last we have continued working in the bottom of the adit level west, and under No. 1 stope, and find the steel-ribbed silver-lead ore continuous. It looks very promising, and as it goes down lengthens, and the rib is equally as good as the specimens given you by Mr. Croucher. In addition to this we have also a strong course of blende ore worth about 2½ tons to the fathom, and a good mixture of copper and lead. The leader of Potter's lead does not hold in length, but it is lengthening as it gets deeper. I think now the level should be cut open wide enough for the tramroad, as upon that being done you can get men to stope away the ore as soon as you please. I should also advise your having the water got out of the sink below the adit, as from the reports and the appearance of the lode where we are now working, I have no doubt it will show you such leaders of ore as will double the value of the mine in your estimation.

WEST GODOLPHIN.—John Pope, May 15: Wilson's lode in the 70, driving west, is 6 ft. wide; a good lode for tin, and very much improved in appearance. Nos. 1 and 2 stopes, in the bottom of the 60 west, are considerably improved; these are the deepest stopes in the level, and as the lode is subject to floors I am hoping the other stopes will improve also when we get a little deeper. Our stopes this month have not yielded anything like the usual quantity of tin. I am afraid our tin sale this month will hardly come up with last month's sale. I will forward full report in time for the committee meeting on Tuesday next.

WEST ROSKEAR.—H. Stephens, W. Bennetts, May 16: The main beam of the engine is resting in the stools on the bob end of the house, and we calculate to fix the cylinder during the week. Early in next week the boiler will be got into the house, after that the various parts of the engine will be proceeded with as fast as possible, by as many sections of workpeople as can conveniently be employed about it. Underground we are looking much the same as for some time past. We calculate to sample about 60 tons of blende on Monday next.

WEST TANKERVILLE.—Arthur Waters, May 16: The various endsand stopes here are yielding ore in quantities equal to the figures given in last week's report. I would add, however, that the drift and rise above the 75, on the hanging wall division of the counter lode, are worth together nearly 4 tons per fathom. This portion of the lode is at present keeping a course which would put it behind the level at the 63. I hope to find that it is standing in the west side of the workings at and above the said 63 fm. level. Our next sampling will take place on Thursday next.

WEST WHEAL TOLGUS.—May 10: We have cut through the south part of the lode in No. 3 cross-cut, in the 145, west of Taylor's shaft; it is 2 ft. wide, and will yield 2½ tons of good ore per fathom. We have put the men to drive west on the north part—the old end; the full width from the north to the south wall is about 12 ft., taking out 5 ft. for the north part and 2 ft. for the south, leaving only 5 ft. for the horse; we call it horse, but it may be called lode for the whole width, and we think from the turn in the north part, towards the south, that the two leading parts will be together in a little further driving. We think we are getting to look more cheering in the 145; both parts in the west breast will now yield between 5 and 6 tons of ore per fathom. The lode in the 135 end west is yielding a little ore, letting out plenty of water, and is easier for driving. It is looking hopeful. We have cut into the south lode, in the 125 cross-cut, about 3½ ft.; there is a little ore saving.—cross-cut still in the lode. Richards's engine was set to work yesterday forenoon all right; the water is all out, and the shaftmen will work in the bottom of the shaft this afternoon. By this you will see we had good speed. Taylor's shaftmen are getting on with their work tolerably well; they were thrown back a little by the breakage of Richards's, but, on the whole, get on very well.

WEST WHEAL TOLGUS.—May 15: Taylor's shaft is secured, and the skip-road completed to the 145, and the skips are now being sent down to begin to draw from the bottom plat. The north part of the lode, in the 145 end west, is yielding 3 tons of ore per fathom; the lode is getting more vughy and more kindly. We shall not do anything more on the south part before cleaning out the stuff in the level, which we shall now proceed to do without any more delay. The lode in the 135 end west is large, with a little ore and very wet; it is not improving as fast as we expected it would, but still it is a kindly end. The stope in the west and of No. 1 winze, below the 135, is yielding all of 13 tons of ore per fathom. The other stopes are yielding much as usual. The lode in the 125 end west is 2 ft. wide, with stones of ore, but scarcely enough to value. We have cut through the south part of the lode in the 125 cross cut south; it is 4 ft. wide, producing 2½ tons of ore per fathom. We commenced to drive west on it yesterday, at 5*l.* per fathom. There is a little more water coming from the 115 end west; the lode is 3 ft. wide—poor. We have put men to clean up the bottom of the 125, and to take up the water, to see if we can sink the winze before the 135 end; if it can be done a pare of men shall be put to do so at once. There is no alteration in Richard's shaft; the lode is 4 ft. wide, yielding a little ore, at times good stones of ore. The lode in the 65 end west is small and poor, but the ground about it continues white, and is easier for driving in. The lode in the 75 end is small and poor. We are preparing for another sampling, which will be on Tuesday next. We hope to sample 330 tons.

WHEAL AGAR.—E. Moyle, Wm Hambly, May 14: The following is our setting report during the past month:—The engine-shaft is sunk 1 fm. 0 ft. 9 in., which is now down 4 fms. below the 205; set to 12 men, at 46*l.* per fathom. The 205, driving east on Waddington's lode, has been driven 1 fm. 1 ft. 3 in.; set to six men, at 22*l.* per fathom. This end is driven about 10 fathoms from the shaft, which we think to have gone over the dip of the rich tin ground, now worth 10*l.* per fathom. The stopes in the bottom of the 205, north of engine-shaft, on Waddington's lode, is 14 ft. wide, and no wall has been yet met with, worth 80*l.* per fathom; set to 27 men, at 9s. 6d. per ton of stuff. The 185 cross cut north has been driven 1 fm. 2 ft.; set to four men, at 10*l.* per fathom. The new shaft has been sunk 5 ft. 9 in., and is now 4 fms. below the 25; set to three men, at 14*l.* per fathom. We hope to get the new bob to work at the 130 this month.

WHEAL CREBOR.—J. Andrews, May 14: The lode in the 120 east is worth 8*l.* per fathom. The lode in No. 1 stope, in back of the 120, is 4 ft. wide, worth 8*l.* per fathom. The lode in No. 2 stope, in back of the same level, is 6 ft. wide, and worth 20*l.* per fathom. The 108, 72, and 48 ends are poor. The lode at the new shaft is 4 ft. wide, and yields a little mundic and copper ore, but not sufficient to value.

WHEAL GRENVILLE.—T. Hodge, May 15: Goold's shaft is going down below the 130 with fair speed. The 140 east end is worth 6*l.* per fathom. The 140 west end produces good stones of tin; we expect to open some good ground in this direction shortly. The lode in the 150, east of western shaft, is worth 8*l.* per fathom. The lode in the 140 east end is worth 7*l.* per fathom. The lode in the 140 west end is worth 6*l.* per fathom. We are pushing on the surface work as fast as the weather will admit. We shall stop our north axles to-morrow to fit new woodwork, and also to heave in the heavy heads. I expect to work again on Saturday next. We shall sell to-morrow about 19 tons of tin.

WHEAL NEWTON.—H. Bennett, May 16: We have fixed the drawing lift at the 50 at Cook's, and have commenced pumping; we hope to begin to drive east and west at this point in a few days. The lode in the 30 end, east and west of the cross cut on the north part of the Well lode, is about 1 ft. wide, composed of carbonate of iron and quartz, with a little silver; it is a very promising lode. The stopes are much the same as when last reported on. All other points remain without much change.

WHEAL KITTY (St. Agnes).—Stephen Davey, Richard Harris, May 11: New Shaft, Pryor's Lode: The lode in the 154, driving west of shaft, is 2½ ft. wide, and worth for tin 8*l.* per fathom; a promising looking lode. The lode in the 142, driving east of shaft, is 3½ ft. wide, and worth for tin 8*l.* per fathom. The lode in the 142, driving west of shaft, is 5 ft. wide, and worth for tin 15*l.* per fathom. The lode in the rise in the back of the 142, west of shaft, is worth for tin 9*l.* per fathom. The lode in the 108, driving west of shaft, is 2 ft. wide, and worth for tin 5*l.* per fathom. The lode in the 94, driving west of shaft, is 2 ft. wide, and worth for tin 7*l.* per fathom. The lode in the 65, driving west of shaft, is 4 ft. wide, and worth for tin 7*l.* per fathom.—Old Lode: The lode in the 100 fm. level, driving west of engine-shaft, is improved in appearance and value; it is now 2 ft. wide, and worth for tin 6*l.* per fathom. The lode in the 90, east of engine-shaft, is poor.

WHEAL PEEVOR.—W. T. White, Joseph Pryor, May 11: The 80 to drive west, on south lode, by six men, for the month, at 7*l.* per fathom, lode worth 12*l.* per fm. Stope in bottom of the 70 (for the purpose of making a trip-plat), by four men, at 2*l.* per fathom, lode worth 12*l.* per fathom. The 70 to drive west, by four men, for the month, at 8*l.* per fathom, lode worth 20*l.* per fathom. Nos. 1 and 2 stopes in back of this level, by eight men, for the month, at 2*l.* 15s. per fathom, each lode worth respectively 10*l.* per fathom. The north part of the south lode to stope at this level, by ten men, at 2*l.* 7s. 6d. per cubic fathom, lode worth 9*l.* per fathom. The 60 to drive west, by four men, for the month, at 6*l.* per fathom, lode worth 12*l.* per fathom. The 48 to drive west, by four men, for the month, at 8*l.* 10s. per fm., lode worth 10*l.* per fathom. Rise in back of this level, by four men, for the month, at 7*l.* 10s. per fathom, lode worth 12*l.* per fathom. Nos. 1 and 2 stopes in back of this level, by eight men, for the month, at 2*l.* 8s. and 2*l.* 10s. per fathom, lode worth in each 11*l.* per fathom. The 36 to drive west, by four men, for the month, at 4*l.* 10s. per fathom, lode worth 15*l.* per fathom. Rise in back of this level, by four men, for the month (rise to be carried 12 ft. long), at 9*l.* per fathom, lode worth 20*l.* per fathom. The deep adit level to drive west of cross-cut, on south lode, by two men, for the month, at 8*l.* 10s. per fathom, lode worth 9*l.* per fathom, with prospects of an early improvement. Our tribute pitches are producing fair quantities of tin, the regular setting of which takes place next month. The mine still continues to open up well, and produces its usual quantities of tin.

WHEAL UNY.—Wm. Rich, M. Rogers, May 13: The lode at Hind's shaft, below the 160, is worth 12*l.* per fathom. The 160 end, east of Goodinge's shaft, yields a little tin. The 160 west is worth 10*l.* per fathom. The 150, east of King's, worth 12*l.* per fathom. The rise behind this end is worth 10*l.* per fathom. The 150, west of incline shaft, is worth 7*l.* per fathom. The 140 east is worth 7*l.* per fathom. The back of the 60 west is worth 10*l.* per fathom.

TREATING WOOD TO PREVENT DECAY.

An improved method of treating wood to preserve it from decay has been invented by Mr. WALDEMAR THILMANY, C.E., of Cleveland, Ohio. After the wood has been steamed in a closed cylinder or chamber to drive off the sap, moisture, and other matters, a vacuum is created by the action of a pump; then the wood is charged with a solution of sulphate of zinc and iron, either combined or separately. The proportion should be about 1 lb. of the sulphate to 100 lbs. of water, more or less, depending upon the nature of the wood, and the purpose for which the treated wood is designed. The surplus liquid or residuum is discharged from the chamber, and then a solution of chloride of barium is forced or charged with the wood. The proportion of chloride of barium used with the sulphate of zinc or of iron is about two-thirds by weight of that of sulphate of zinc or of iron in 100 lbs. of water—that is to say, if 3 lbs. to the 100 lbs. of water of sulphate be used, then the chloride of barium solution would require to be about 2 lbs. to the 100 lbs. of water. The application of the chloride solution may precede that of the sulphate solution if more convenient, the object being to produce by chemical action within the pores of the wood an insoluble sulphate of baryta and chloride of zinc or iron, as the case may be. In carrying out the process the wood or timber is placed in a closed chamber of iron or copper, capable of sustaining the pressure to which it may be subjected by the steam or otherwise in the process—say, five to eight atmospheres, more or less. By these means the crude sap, moisture, and like matters are vaporised, and the soluble parts or matter of the wood eliminated and drawn off by a vacuum pump, and a vacuum being formed in the chamber, the wood becomes very readily charged. He now introduced under hydrostatic pressure a solution of either sulphate of iron or sulphate of zinc, thus filling the cells and pores of the timber therewith. He now draws off the surplus solution in the chamber, and then introduces a solution of the chloride of barium under hydrostatic pressure. Then the elective chemical affinity directly decomposes the soluble zinc or iron salts, forming the insoluble sulphate of baryta and chloride of zinc or of iron in the cells and tissues of the wood, although the chlorides of zinc and and iron are soluble alone, but when combined with the sulphate of baryta there is formed (according to the metal used) chloride of zinc or of iron, which becomes so united in the tissue of the wood that it cannot be washed out when exposed to the action of water or moisture, and by these means, together with insoluble sulphate of baryta, the decay of the wood is arrested.

In treating large timbers it may not be convenient to subject such pieces to the action of steam in a chamber. In such instances it is deemed sufficient to charge such timbers with the sulphate of zinc or of iron and the chloride of barium without subjecting the pieces first to the action of steam. These agents may be forced into and through the structure of the wood by hydrostatic pressure. In this manner the crude sap and albumen of the wood are driven off, and their place will be taken by the solutions of the chloride of barium and sulphate of zinc or of iron, and the result of this mode of treatment will be the same as when the wood is first steamed, but such treatment is only necessary for large timbers, the process being slower than when the wood is first steamed. The advantages of using the chloride of zinc or of iron are that the wood may be treated in either an iron or wood tank, and these agents—chloride of zinc or of iron—will not attack the iron and other metal fastenings of a ship and other structures when exposed to moisture, or either salt or fresh water; the action of the said zinc tends to toughen the fibres of the wood; the process is attended with little cost comparatively; and the cost of these chemical agents is slight.

GENERAL BANKING COMPANY.

The well-known banking business of Messrs. Grant Brothers and Co. is, on the retirement of one of the partners, to be taken over by the GENERAL BANKING COMPANY, which has been formed with a share capital of 300,000*l.*, two-thirds of which will be offered for public subscription on Monday next. It is proposed to carry on an ordinary banking business, and hence current drawing accounts will be opened with persons or firms properly introduced upon terms which are stated in the preliminary prospectus, and which appear to be liberal. Deposit accounts, both for short and long terms, and the bank will undertake the purchase and sale on the Stock Exchange of stocks and shares for persons desirous of making investments. Loan and agency business will also be undertaken, municipal and county secured by city or county rates being negociated, and it is mentioned that the experience and results of City loans effected give this bank special facilities for the negociation of this class of business.

Among the first business undertaken is the placing of Guaranteed Five per Cent. Debenture Bonds of the Tasmanian Main Line Railway. It is explained that by contract, dated August, 1871, the Tasmanian Government bound themselves to pay 5 per cent. upon the money expended on the construction of the railway up to 650,000*l.* during four years of the construction, and 30 years after the opening of the entire line for traffic, equal to 32,500*l.* per annum. The line was opened for traffic on the day stipulated in the contract, and the stipulated number and speed of trains has been kept up ever since; but since July, 1876, the interest has been withheld, on the ground that certain things had not been done to the satisfaction of the Government. The railway company have in vain endeavoured to obtain details of complaint, or to get the dispute submitted to arbitration, the result being that the price of the railway bonds has fallen more than 50 per cent., the present price being 59*l.* to 61*l.* per 100*l.* bond. The railway company have since obtained an English Act of Parliament, sanctioning the raising of 100,000*l.* in debentures in priority to the 650,000*l.* in 1872, and to reduce the interest from 5 to 4 per cent.

The bad faith of the Tasmanian Government appears to have prevented the placing of more than a small portion of the 300,000*l.* loan offered last month, and there is now a disposition shown to treat the railway company more equitably. It is thought, moreover, that the Government is likely to exercise its right of purchasing the line, which would place the railway company in possession of an amount which would assure a good return to the debenture-holders, and something for the shareholders. It is explained that the present quotation of 60 arises from the fact of but few persons being aware of the position of this railway and its relation to the Tasmanian Government, and especially to the recent communications that have taken place between the Tasmanian Government and the company. Under these circumstances it is believed that the debentures will be a good stock to hold.

TO THE METAL TRADE.

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(ESTABLISHED 1849.)

The Mining Market: Prices of Metals, Ores, &c.

METAL MARKET—LONDON, MAY 17, 1878.

IRON.	£ s. d.	£ s. d.
Pig, GMB, f.o.b., Clyde..	2 9 3–	—
,, Scotch, all No. 1 ...	2 11 0–	3 10 0
Bars, Welsh, f.o.b. Wales	5 2 6–	5 5 0
,, ,, in London.	5 15 0–	—
,, Stafford., ,, .	6 15 0–	7 10 0
,, in Tyne or Tees ...	5 10 0–	5 15 0
,, Swedish, London..	9 10 0–	—
Rails, Welsh, at works.	4 17 6–	5 0 0
Sheets, Staff., in London	8 5 0–	8 10 0
Plates, ship., in London	6 15 0–	6 17 6
Hoops, Staff.	7 15 0–	8 0 0
Nail rods, Staff. in Lon.	6 10 0–	7 0 0
STEEL.		
English, spring 13	1) 0–19	0 0
,, cast 30	0 0–40	0 0
Swedish, keg.....14	0 0–	—
,, fag. ham. 15	0 0–	—
LEAD.		
English, pig, common...16	15 0–	—
,, ,, L.B.....17	0 0-17	2 6
,, ,, W.B. 17	10 0–	—
,, sheet and bar..18	0 0–	—
,, pipe.....18	10 0–	—
,, red 19	15 0–	—
,, white 24	10 0–26	10 0
,, patent shot ...22	10 0–	—
Spanish.....16	7 6–16	10 0
NICKEL.		
Metal, per cwt. 18	0 0–20	0 0
Ore, 10 per cent. per ton.24	0 0–26	0 0
QUICKSILVER.		
Flasks of 75 lbs., ware.	6 17 6–	7 0 0
SPELTER.		
Silesian..... ..	17 15 0–	—
English, Swansea	21 0 0–	—
Sheet zinc	22 0 0–	23 0 0

TIN.	£ s. d.	£ s. d.
English, ingot, f.o.b...	65 0 0–	—
,, bars ,, ...	66 0 0–	—
,, refined.....	68 0 0–	—
Australian	60 15 0–	61 0 0
Banca	63 0 0–	(nom.)
Straits	60 15 0–	61 0 0
COPPER.		
Tough cake and ingot.	67 0 0–	67 10 0
Best selected	68 0 0–	68 10 0
Sheets and sheathing .	72 0 0–	—
Flat Bottoms	75 0 0–	—
Wallaroo	72 0 0–	—
Burra, or P.C.C.	70 0 0–	—
Other brands	68 0 0–	69 0 0
Chili bars, g.o.b..nom.	62 0 0–	—
PHOSPHOR BRONZE.		
Bearing metal	£112	0 0
Other alloys	£120 0 0–	140 0 0
BRASS.		
Wire	7½d.–	7½d.
Tubes.....	7¼ –	7½
Sheets	8 –	8¾
Yel. met. sheath. & sheets.	6 –	6⅛
Nails composition.....	8¼ –	9
TIN-PLATES.*	per box.	
Charcoal, 1st quality ...	0 19 6–	1 1 0
,, 2nd quality ...	0 18 6–	0 19 6
Coke, 1st quality	0 17 0–	—
,, 2nd quality	0 16 0–	0 16 6
Black .....per ton	16 0 0–	16 10 0
Canada, Staff. or Gla., at Liverpool	11 10 0–	12 0 0
Black Taggers, 450 of 14 × 10	30 0 0–	—

* At the works, 1s. to 1s. 6d. per box less for ordinary; 10s. per ton less for Canada; IX 6s. per box more than IC quoted above, and add 6s. for each X. Terne-plates 2s. per box below tin-plates of similar brands.

REMARKS.—There has been no variation of any consequence in the general position of our markets; and, judging from present appearances, there is no probability of any material change. Metals are still in a most prostrate condition, and it will require a powerful effort to resuscitate them, and certainly before enhanced prices can be entertained there must be unmistakeable evidence of a revival of legitimate business generally, and a fair prospect of its continuance. Some people seem to possess but one idea in regard to the effect that prices will have upon trade; they are constantly repeating that prices are low, and upon that ground they build their hopeful expectations; but what a fallacy is this, for what are the prices of 1873 to do with those of the present year? The comparison is both useless and ridiculous, and only calculated to mislead. The years referred to were false and inflated periods, and the temporary advantages then realised have since been more than lost, and, in fact, our present misfortunes and sacrifices may in great part be traced to the ill accomplishment of three years. Prices were carried to a most unnatural height, and it was immense stupidity to prolong the artificial elevation of our markets. The loss and suffering that have arisen from these times render it very undesirable for a return of similar periods, and it would be better if they could be wholly blotted out, for they utterly disorganised and demoralised the industrial and commercial community, and helped to develope the resources of foreign countries to such an extent as to prove an excessive and ruinous competition to British commerce. But if comparison of prices is made at all it should be with those ruling at similar periods of depression, and not with those of good times, as that is absurd; and if any additional circumstances have occurred they must also be taken into account, otherwise it is impossible to form a correct opinion.

The years 1870-71 are, perhaps, the nearest parallel to this year, and it will be found that the prices of some metals are not so low now as then, and stocks are heavier. Take, for instance, the price of copper in October, 1870. Chili bars were sold at 60*l.* 10s., and some say as low as 59*l.* 10s. Can 62*l.*, then, be considered cheap? Copper sheets and sheathing were also offering, and bought at 70*l.* Is 72*l.*, therefore, a cheap price? The supply of all metals is now more extended than formerly, and, according to the reports of some of the producers, may increase. But in addition to the depression caused by overtrading, which has brought us nearly to the brink of a commercial crisis, there is great poverty and distress in the country, arising from the wicked and infamous repudiations of national debt by foreign Governments, and credit, in consequence, has been forfeited; but another evil of not much less magnitude, which also continues to make itself felt, is the wide-spread famines of India, China, the Brazils, and other parts of the world.

In attempting a restoration it must be by slow and sure measures; no hasty movement will succeed. The unwary may be drawn in by a sudden impulse, but only to suffer still greater loss and disappointment. There is no occasion to hurry, and it may not be amiss to allow even the first move to go by rather than begin to operate prematurely and risk a serious loss. When the right time comes the whole advantage will not be reaped at once, and there will be plenty of opportunities for people to make money if they will only act with caution now and discretion then. Men may do much by economy and perseverance to restore their shattered fortunes, but before any steps can be taken or progress made to enlarge the sphere of operations an undoubted security must exist that a lasting peace will be made between the European nations; but as yet there is nothing decisive on this point, and although "no news is said to be good news," and that maxim may be generally accepted, yet in the present instance it would be a very unsafe speculative principle upon which to base any commercial transaction.

COPPER.—This week, in comparison with last, shows some improvement, a few orders having been given out for wrought and unwrought, and the market, on the whole, is somewhat better, which, however, is not saying very much for it; but a little enquiry just now soon makes an impression, and sellers have not been behind hand in securing the slight benefit from the improved feeling, and have thus far been fortunate in realising in a few instances as much as 20s. per ton on raw and 10s. on manufactured; but the full extent of the rise appears to have been reached, and the market, although closing steady, shows no symptom of any further advance. The Indian exchange being weaker has caused former limits to be withdrawn, and further advices are awaited before effecting increased purchases. Buyers of tough and best selected, observing the hardening tendency, have put forward their enquiries for distant deliveries, which reveals a speculative disposition, and sellers do well in turning it to the best account by tacking on a little to the price, but they should not refuse the regular orders, even if better prices cannot be obtained. The statistical position of the article has not improved, neither does consumption improve, or the position of the market improve, and this is owing to the retention and monopolising of stocks, and until they are dispersed there will be no chance of a permanent improvement. Similar experiments have been made before, and have invariably failed; and if they could not succeed in former times it is scarcely likely that any good can be done now. When supplies came forward principally from one or two quarters it was easier to control prices, but the trade no longer depends upon Chili: and, as there are several other sources of supply been opened up of late years, the price of Chili does not rule the trade any longer.

During the last year or two prices from Valparaiso have been mostly quoted dearer than those prevailing in London, and yet they have exercised little or no influence, and this is one of the reason why stocks accumulate. Importers pay too much for their copper on the other side, and it is marvellous that they should have continued to do so for so long a time in the face of a depressed and declining market here; and now what is the result? Either they must hold for nobody knows how long while the copper is eating its head off with charges, and causing the market to remain flat and unsettled, or make a positive sacrifice and clear away the bulk from public statistics. If the copper had been originally sold in a proper way it would have been distributed well amongst consumers by this time, in whose hands more of it ought to be; and holders would doubtless do better to expedite sales, and get the market relieved of some large portion of stocks, than to keep dragging on and only finding the last position to be worse than the first. Holders may rest assured that consumers will not possess any confidence in prices while stocks continue so large and supplies do not diminish, and business will, therefore, be chiefly confined to immediate requirements. The charters are 1300 tons for the first half of this month, consisting of 850 tons bars and regulus and 350 tons in ore and regulus for England, and 100 tons bars for the Continent; the price, freight, and exchange are lower or equal to 61*l.* 5s. in Liverpool, without merchants' commission.

IRON.—The changes in our market are very unimportant; an occasional increase in the demand for one or two particular description of iron takes place, and causes a temporary hardening in the price, yet the trade in the aggregate shows not the least improvement, and if the question of general prices were considered it would be found that lower rates preponderate. However, the alterations altogether are so insignificant that the market may fairly be described as dull, and prices nominally the same as last quoted. Buyers undoubtedly are in no hurry about buying, or in the least alarm that higher quotations will ensue; they feel they can very well afford to abide their time without running much risk of being shut out in the cold. The prices may be comparatively low, but not low enough to excite an additional demand, which is necessary before enhanced prices can be realised. The trade is in too poor a condition, and there is not sufficient back bone in business to maintain a rise even if one were attempted; but we are not in the least apprehensive that it will be tried, for not only are circumstances against it, but the time would be very inopportune; in fact, it would be far better for the respectable members of the trade that low prices continued for some time longer, and that dear money prevailed, for in that case a good many houses which are bolstered up by their bankers would probably have to succumb, and the course would then be clearer for those who remained, but who are now subject to undue competition from reckless traders. The markets would be all the better for a change in this respect, for one of the difficulties towards recovery would be removed, and the character of the trade would be greatly improved by shutting up some of the lowest class works. Some change must take place sooner or later, for it is impossible to continue going on as the working members of the trade now do, employers and employed continuing to work antagonistically to one another's interests.

Everyone should no their utmost to improve the trade, for the lamentable state in which business is reported to be in from all producing districts is most distressing to all who are in the least interested in the welfare of the trade; from nowhere is anything like activity said to govern the market, but all reports are alike unanimous in their complaints of dulness, prices being low, yet, generally speaking, too high to enable merchants to carry business satisfactorily through. Business is said to be in a most unsatisfactory state at Middlesborough and neighbouring district; and, although quotations have been reduced, there does not appear to have been any more animation observable on the markets. Masters ask 39s. for No. 3 Cleveland pig, though merchants are very loath to give more than 38s. per ton. However, in some few instances, they have met one another half-way, and carried through small transactions at 38s. 6d., while in others masters have given way, and done business at 38s. 3d. per ton. The returns from the Cleveland ironmasters show a decrease in the production of 11,604 tons for last month, while the decrease of stock in the district is only 1151 tons. Ship-plates are now procurable at 6*l.* 2s. 6d. per ton, with the demand being very small, and business transactions of a particularly limited character. The reports from Sheffield are very unsatisfactory, stating that the depression becomes greater and greater every day, prices showing a downward tendency, with the demand being as slack as it is possible to be. For no kind of iron is the request lively, but all descriptions are alike sharing more or less in the great monotony which is so apparent throughout the kingdom. The forges appear to be very badly off for orders at Leeds; the best Yorkshire iron seems to be the only description which does not appear to share so much in the great distress which the other kinds do. Quotations are unaltered, though in some cases masters have given way slightly.

Undisturbed quietness is said to rule the markets at Barrow-in-Furness, and although in some few instances masters have accepted lower prices, very little business worthy of note has taken place. Stocks generally continue high, although in some few instances we read of makers having cleared out all their warehouse iron. The sellers of scrap and iron ore are, perhaps, rather better off for orders than other descriptions of sellers are, but no great improvement can be reported; prices are unchanged, and remain tolerably firm. Speculation appears to have quite died out, and orders which are passed into contracts are chiefly of very scanty dimensions, every one appearing to be fearful of making losses over transactions. The mail from New York of the 4th inst. shows that no improvement is observed in that country. Sales of 1000 tons of No. 1 and No. 2 foundry have been done at $17 50c. to $18 50c.; quotations for No. 1 X being $18 to $19, No. 2 X $17 to $18, and forge $16 to $17. A limited demand exists for Scotch, consumers merely buying such as is required for immediate delivery, Coltness being obtainable at $25 50c., Glengarnock $24 75c., and Eglinton at $24. Scrap is said to be dull and unchanged, quoting No. 1 wrought at $21 to $22 from yard, and cast at $14 50c. to $16 50c. A fair demand exists for rails at $32 to $37, and old $19 to $19 50c. Manufactured is quiet and steady. The imports into New York from Jan. 1, 1878, to April 3 was 2544 tons of bars, 2685 tons of pigs, and 3832 builders' sheets, as compared with 1330 tons bars, 4624 tons pigs, and 10,605 tons builders' sheets in the corresponding period of 1877. The tone of the warrant market at Glasgow still continues dull, the price fluctuating betwixt 49s. 4½d. and 40s. 7½d. for prompt cash. Prices are reported as being slightly lower for makers' iron. Our markets now close for Scotch pig iron at 49s. 3d. to 49s. 4½d. cash.

SHIPMENTS.

For the week ending May 12, 1877 ..... Tons	12,392
For the week ending May 11, 1878	9,348
Decrease	3,054
Total decrease for 1878	18,571
Imports of Middlesborough pig-iron into Grangemouth:—	
For the week ending May 11, 1878 ..... Tons	7,576
For the week ending May 12, 1877	6,707
Increase.....	869
Total increase for 1878	2,538

FURNACES.

In blast May 12, 1877	113
In blast May 11, 1878	95

TIN.—During the week prices of English have declined 10s. per ton, and foreign 20s. per ton, Australian having been reported at 60*l.*, but the market to-day is again rather better. The mail from New York on the 1st inst. states that there is no improvement in the position of this article, the market continuing dull and quite spiritless. Sales in a jobbing way at 14 c. down to 13⅞ c. Banca, 17¼ c.; Straits, 13⅞ c. to 14 c. on the spot, and 14⅜ c. to arrive.

TIN-PLATES.—The price of plates is likely to be higher, as there has been another meeting of makers at Swansea, at which it was resolved by about four-fifths of the trade to make a reduction in the make of 20 per cent. for six months, commencing from the first Monday in June to December 31, with a forfeit of 500*l.* for any house selling below 16s. 6d. in Liverpool.

SPELTER dull, and prices easy. At public sale yesterday 100 tons of zinc has been sold at 20*l.* 7s. 6d. to 20*l.* 10s., a fall of 12s. 6d. per ton. The New York market report states that there is no business in domestic, and the position of the market is entirely nominal at the reduced quotation of 5 c. to 5¼ c. for common, and there is no market for foreign.

QUICKSILVER.—Sales reported at 6*l.* 17s. 6d. Very little enquiry.

THE IRON TRADE.—(Griffiths's Weekly Report).—Friday evening. The Glasgow market for Scotch pig iron opened this morning strong, with business at 49s. 4d. This afternoon the market was weaker, closing with sellers of E.M.B. at 49s. 3d. This is 3d. lower than the closing price last week. We quote makers' No. 2 iron:—Gartsherrie, 57s. 6d.; Coltness, 61s. 6d.; Calder, 57s. 6d.; Lanigoan, 59s.; Summerlee, 57s.; Monkland, 50s. 6d., f.o.b. Glasgow; Glengarnock, 56s. 6d.; Eglington, 50s. 6d., f.o.b. Ardrossan; Shotts, 59s. f.o.b. Leith; Kenniel, 54s. 6d., f.o.b. Bo'ness. There is nothing special to notice in the iron trade this week. No contracts of importance for rails to record in either steel or iron. There are enquiries on the market for rails for the North of Europe; probably this business will remain in abeyance until political matters in the East are more settled. We cannot report a large business on our market in finished iron this week. Sheet-iron for galvanising purposes is the most in demand, and in this sort a fair business has been done. Best boiler-plates continue in slow demand. The South Staffordshire high-class makers are not busy; those in North Staffordshire have orders to keep the mills running. The Yorkshire houses are moving very quietly in plates.

The trade in marked Staffordshire bars is quiet, but prices are maintained for the best qualities 8*l.* 10s., and 12s. 6d. extra for the Earl of Dudley's. The raw material is depressed, and the markets both in Middlesborough and Glasgow are weaker, with slightly receding values. Two failures have taken place among the Welsh tin-plate makers this week—the Garth Iron and Tin-plate Company, and the Waterloo Tin-plate Company (Limited). Liabilities of the former, 80,000*l.*; the latter, being a small concern, indebtedness is of the same character. The tin-plate trade is no better. A meeting was held yesterday at Swansea, and a resolution passed to reduce the make 20 per cent., but we fear difficulties will stand in the way of carrying out the resolution by some of the small makers.

Messrs. HARRINGTON, HORAN, and CO. (Liverpool).—Arrivals here during the fortnight of West Coast, S.A., produce:—Iberia, from Valparaiso, 820 tons bars, 85 tons ingots; Magnet, from Carrizal, 745 tons regulus. At Swansea—*Nil.* Stocks of copper (Chilian and Bolivian) in first and second hands, likely to be available, we estimate at—

	Ores.	Regulus.	Bars.	Ingots.	Barilla.
Liverpool.....	—	917	13,605	—	—
Swansea	2189	6911	2,043	—	—
Total.....	2189	7828	15,648	—	—

Representing about 19,609 tons fine copper, against 19,660 tons April 30; 15,252 tons May 15, 1877; 9732 tons May 15, 1876; 12,067 tons May 15, 1875. Stock of Chili copper in Havre, 8688 tons fine, against 9274 tons May 15, 1877; stock of Chili copper afloat and chartered for to date, 9500 tons fine, against 12,000 tons May 15, 1877; stock of foreign copper in London, chiefly Australian, 6495 tons fine, against 4400 tons May 15, 1877.

According to the Board of Trade Returns the total imports and exports into and from this country for the first four months of the following years were—

	1876.	1877.	1878.
IMPORTS—Copper in ores .....Tons	3,207	3,810	3,138
Ditto, reguius	4,472	5,172	5,745
Ditto, bars, cakes, and ingots.....	11,418	14,025	13,833
In pyrites (estimated)	5,111	6,192	5,081
Total imports	24,208	29,199	27,797
EXPORTS—English, wrought & unwrought.	6,957	7,181	10,800
Foreign copper, unwrought.....	5,222	5,680	4,435
Yellow metal.....	4,151	5,719	5,348
Total exports.....	16,330	18,580	20,583

The settlement of the fortnightly account took place in the MINING SHARE MARKET this week, and very little fresh business has been transacted either for speculation or investment; consequently our quotations are still for the most part nominal.

The mines chiefly dealt in have been D'Eresby Mountain, D'Eresby Consols, Van, East Van, Tankerville, Leadhills, Mellanear, South Condurrow, Rookhope, Parys Mountain, and a few others.

TIN, although said to be a little firmer, shows no improvement in price, and business in these mines is at a standstill.

At the Botallack quarterly meeting the accounts show a loss of 47*l.* 17s., and a debit balance, which was carried forward, of 2732*l.* The costs for the three months was 4584*l.*; the tin sold (123 tons and copper 60 tons) realised 4654*l.* Wheal Peevor, 6¼ to 6⅜; the points in operation are estimated to be worth in the aggregate 173*l.* per fathom, and the tribute pitches looking well.

Killifreth accounts show a loss of about 700*l.*, a debt on the mine of 5163*l.*, and a call of 2s. 6d. per share on 3281 shares (400*l.*) was made. The tin sold realised 553*l.*; copper, 190*l.* The agents state that the prospects of the mine have improved, and they have reason to believe that by further development the adventurers will be rewarded for their outlay. Out of the 6000 shares into which the mine was originally divided 2719 have been relinquished and forfeited. Wheal Sisters account for six weeks shows a loss of 1300*l.* About 190 tons of tin were sold. Carn Brea is quoted 39 to 41; Dolcoath, 29 to 31; East Pool 8½ to 9; Penstrutaal, 4s. to 5s.; South Condurrow, 11 to 11½; Tincroft, 10 to 11; West Godolphin, 1 to 1¼; Wheal Agar, 3⅜ to 4½; Wheal Grenville, 3½ to 3¾; Wheal Kitty (St. Agnes), 1½ to 2; Brenngelly, 1¾ to 2¼; Cook's Kitchen, 1⅜ to 1⅝.

COPPER MINES are still very quiet, and no business doing. Devon Great Consols are quoted 2¼ to 2⅜. Parys Mountain, 8s. to 10s.; there is a strong feed of water coming from the 90 south, which the agent thinks is coming from a lode not far ahead. Mellanear, 3½ to 4. South Caradon, 60 to 70; West Seton, 12 to 14; West Tolgus, 58 to 60.

LEAD MINES are mostly dealt in; and, although lead is low, there seems to be a good demand springing up for blende, of which metal most lead mines have a quantity. Roman Gravels, 7⅜ to 8; the 95 south is worth 3½ tons of lead ore per fathom. The sampling for this month is 180 tons. Tankerville, 3½ to 4½; Van, 20 to 21; East Van, 4½ to 5; Rookhope Lead, 17s. to 19s.; Great Laxey, 18 to 19; Glenroy, 15s. to 17s. 6d; Leadhills, 3¾ to 4½; Llanrwst, 2 to 2½; Minera, 10 to 11.

D'Eresby Mountain largely dealt in, at 80 to 100; a full description of the mine will be found in another column. The rich stope, it appears, is in a part of the lode called a "heading," missed by the old miners, and which, as far as seen at present, is at least 80 fms. long; the present stope, to which so much reference has been made, is only 5 fms. long. D'Eresby Consols, 11 to 13; this mine is looking promising, both on the Gorse heading and on Owen's lode. Pateley Bridge, 2½ to 3; West Pateley, 2 to 2½; South Darren, 38s. to 42s.; there is a good improvement in the 90 end, now valued at 30*l.* per fathom, and the winze below the 90, 50*l.*; the different stopes vary from 10*l.* to 28*l.* per fathom. The shaft is down to the 100, where a new level will soon be commenced to meet the one from the winze. The 40 tons of ore for the month sold, on the 11th inst., for 643*l.* West Tankerville, 12s. 6d. to 17s. 6d.; the drift and rise above the 75 are worth 4 tons of lead ore per fathom, and it is hoped that this rich lode will be found standing by the side of the 63 fm. level.

Bodidris, 1½ to 1¼; Aberdaunant, 7s. to 9s.; Assheton, ¾ to 1; Glyn 13s. to 15s.; Grogwinion, 3 to 3½; Herodsfoot, 6 to 7; Denbighshire, 15s. to 25s.; Pandora, 15s. to 20s.; St. Patrick, ⅞ to 1⅛; Temple, 4½ to 4⅝; Tyn-y-Fron, 1⅜ to 1⅝; West Assheton, ½ to ¾; Wye Valley, 1¼ to 1⅜; West Wye Valley, 2½ to 3. West Chiverton, 9 to 11; the accounts presented to the meeting show a cash balance due to the bankers of 5983*l.* 14s. 1d; the profit and loss account show returns of lead, blende, &c., to April, 8248*l.* 4s. 8d.; costs charged to Feb. 23, 8167*l.* 18s. 5d.: profit, 80*l.* 6s. 3d. The statement of liabilities and assets show a balance of assets over liabilities of 1160*l.*, indicating as an asset a month's labour cost paid but not debited. Caron, 2 to 2½; Mawston, 55 to 60; Red Rock, 2 to 2½; St. Harmon, 2½ to 3½; West Goginan, ¾ to 1¼.

FOREIGN MINES.—Blue Tent, 3 to 3½; Hultsfall, 4½ to 5½; Don Pedro, 12s. 6d. to 17s. 6d.; Eberhardt and Aurora, 6¾ to 7¼. Chontales, 10s. to 12s. 6d.; the advices for the month show gold returns 160*l.*, loss 27*l.* The agent states that the mine now gives every encouragement of success in the future. The returns from Javali for the month show a good profit; gold, 475 ozs., valued at 2000*l.*; costs, 1010*l.* The agent hopes to send an equally good remittance next month. Flagstaff, 17s. 6d. to 22s. 6d.; New Quebrada, 1⅜ to 1½; Panulcillo, 12s. 6d. to 17s. 6d.; Port Phillip, 10s. to 12s. 6d.; Richmond, 9 to 9½, ex div.; Santa Barbara, 25s. to 30s.

We understand that the agents, clerks, foremen, and others at Devon Great Consols have already consented to the twelve monthly pays instead of thirteen.

The Market for Mine Shares on the Stock Exchange showed but little animation until to-day (Friday), when a decidedly better feeling set in, which it is cordially hoped will continue. It has been determined to adopt boring machinery at Devon Great Consols, and from the much larger quantity of work that can be got through in a given time it is likely to prove equally advantageous to adventurers and miners. The Port Phillip and Colonial Company's telegram gives the profits for April at 1430*l.*, of which 800*l.* was remitted.

The Minera Mining Company statement of accounts for the quarter ending March 23 showed a profit of 1111*l.* 2s. 6d., which, added to 2596*l.* 18s. 10d., the amount brought forward after payment of the February dividend, gives an available balance of 3708*l.* 1s. 4d. Out of this the directors declared a dividend of 1125*l.* (2s. 6d. per share), and carried 10 per cent. thereof to the reserve fund, which must now be of considerable amount, although the figures are withheld. The persistent efforts to depress the property appear to continue, and a note is appended to the accounts that "the low prices for both lead ore and blende continue seriously to affect the dividend, and at present there is no prospect of an improvement in prices." The accounts, show that during the month ending Dec. 29 the total costs, including royalties, were 2870*l.* 15s. 10d., and the mineral sold realised 2982*l.* 5s. 6d., giving the adventurers a profit of 9⅜d. upon each 1*l.* expended; whilst during the month ending March 23 the total costs, including royalties, were 2818*l.* 18s., and the mineral sold realised 3327*l.* 7s., giving the adventurers a profit of 3s. 7¼d. upon each 1*l.* expended, or as nearly as possible 18 per cent. profit on the outlay. It would be interesting to know how the reserve fund is deposited, what becomes of the interest upon it, and why it is sought to depreciate the property?

The Clogau (Welsh Gold) report states that the stope on the branch lode continues to produce good visible gold, and remunerative rock is being obtained from No. 7. The Britten pans worked during the month 448 lbs. of ore, which produced 46 ozs. 17 dwts. 10 grs. of gold.

The Devon Great Consols question connected with the return to the calendar month system, if not absolutely settled, may be regarded as so nearly arranged as to give no further cause for uneasiness. The agents, clerks, foremen, and others have already agreed to accept the calendar month system of payment, and the remittance during the week of 2800*l.* necessary to pay the four-weeks wages, was accompanied by an order to supply the board with a list of the names of those willing, or otherwise, to accept the calendar month system. As it is well understood that neither bargain-takers nor men paid by the day are affected, it will no doubt be announced next week that all dispute upon the matter has ceased. Fortunately there is not likely to be a repetition of the scenes witnessed at Devon Great Consols in 1866, when the constabulary and military were sent to Tavistock to prevent riot; but it may be mentioned that even then the feeling of the board was the same as at present. The Chairman (Mr. W. A. Thomas) then stated that "anything like dictation could not, and would not be submitted to. Every man had a right to do what work he pleased, and at what price he pleased. The directors were free to set bargains, and the men were free to accept them or not. They need not take a bargain if they did not think they were sufficiently paid, and if they refused the agents must resort to the alternative of not having the work done." In connection with the question of the calendar month system, it is a fact that it is followed at Great Laxey, Roman Gravels, Tankerville, and a still more startling fact perhaps for some of the lunar advocates, that at a neighbouring mine to Devon Great Consols, which sells the next largest quantity of copper, the four-weeks system has never been introduced, and an officer writes that the four-weeks system really "means a little over three weeks work, including measuring days, setting days, paying days, Maze Mondays, and so on, of which some of our big mines are very prolific." Now, it will readily be seen that in the first place, inasmuch as there is about a week's loss of time upon each pay, the adventurers get 40 weeks work per annum on the calendar month system, and 39 on the four-weeks system, and that in the same way the bargain-takers pay for the time lost can earn but 39 weeks wages in the year instead of 40, whilst agents and monthly men receive the same wages in the course of the year whether working or idle, or enjoying Maze Monday. It is suggested by the officer mentioned that four months or six months contracts at a just price at time of setting, subsist in accordance with results, would give greater satisfaction to the miners.

St. John del Rey, 305 to 315; advices have been received from Morro Velho to April 2. The gold produce for March is higher by 4514 oits., with an improved yield per ton of 0·706 oits. compared with February. In the reduction department the produce was at the rate of 1336 oits. per diem, a good return considering the mixed nature of the mineral treated. The daily average mill duty (188·92 tons) is a trifle under former returns, owing to the large admixture of quartz. The total quantity of amalgam produced was 93,528 oits., which yielded gold to the extent of 44·30 per cent. Of amalgamated sand treated there was an increase of 512 cubic feet. At the Praia the results continue to be satisfactory, the amount of mineral and tail sand treated, and the gold therefrom derived steadily increasing. The new appliances for an extended treatment of the refuse sand are now completed, and require but a few unimportant additions and alterations before being permanently put to work. The profit for March was 844*l.* 0s. 11d.

New Quebrada, 1⅜ to 1½: the general meeting has been convened for May 30. The accounts show a debit balance of 36,294*l.* 13s. 3d., and a balance at bankers at Tucacas and at the mines of 681*l.* 9s. 1d. The directors' report states that in addition to the assets included in the balance-sheet there was about 6000*l.* worth of ore after pay-

ment of all expenses afloat for Swansea, and 15,000 tons, chiefly yellow, broken at the mines. After protracted and difficult negociations the directors succeeded in making arrangements with the Bolivar Railway Company for the current year, 1878, by which the contract quantity to be delivered to the railway for carriage has been reduced from 20,000 to 10,000 tons—the rate of carriage to be in proportion to the percentage of the ore delivered. The directors have recently appointed Mr. W. J. Holman, who has had great experience in Cornish, South American, and Italian mines as their mining superintendent, and this gentleman is now in charge of the operations. They have also secured the services of an assayer, who tests the value of the parcels of ore as broken, thus ensuring the dispatch of such ores as may be consistent with the modified contract with the railway company. The arbitration as to the concessions secured from the Venezuelan Government for 20,000*l.* has been satisfactorily concluded, the arbitrator having awarded that this company should bear 5500*l.* and the Bolivar Railway Company 14,500*l.* towards the principal sum above named, but inasmuch as this company had already borne the cost of the concession of 1873 at an outlay of 5000*l.* (part of the 20,000*l.* above-named) the further payment devolving on this company as the result of the award has been reduced to 500*l.* For the purpose of supplying reduction works, boring machinery, &c., it is necessary that further moneys must be provided by the shareholders and the amount and modes of securing which will be stated at the meeting. The imperative necessity for providing this additional capital must be obvious to all, as it is only by such means that the acknowledged resources of the property can be developed in a manner calculated to meet the engagements to the Bolivar Railway Company. The operations have been conducted at the mines without interruption of any kind, and with a due regard to the necessity for extending the exploratory works, establishing airways, and improving the facilities for conveying the ore to surface. A new bridge has been constructed across the Quebrada, and direct tramway communication thereby established between the Santa Catalina level and the Railway Terminus, which is also in direct connection with the deep level. The loading arrangements are made upon the hopper system, and answer well.

In connection with the Utah and London Bank Mr. Henry Sewell refers to what he stated in 1875 in his Emma pamphlet as to the establishment of an English bank in Salt Lake City—"The interest of the local bank is 1½ to 2 per cent. per month. I would, therefore, predict splendid results for such an institution in that city. A good English bank would do wonders for Utah's mines, as the actual local banks are very little better than big pawning establishments." The San Francisco Evening Post states that it has repeatedly stated that British capital was seeking safe investment in the States and Territories of the Pacific Slope, and ridiculed the idea of American capital being sent to Europe for investment. The fact that capital may be more profitably employed on this coast in productive industry, such as mining, land reclamation and irrigation, and in banks and insurance companies, than it could in any of the old States of Europe is sufficient to account for the set of British gold hitherward. Among the most profitable mines of this State are several which are held mainly, if not altogether, in London. The success of the California banks having their headquarters in London or floated on English capital, is likewise remarkable. Their earnings, in proportion to the capital invested, have been almost unique in the history of banking. What is needed, it is continued, is to create a feeling of perfect confidence in England, and any amount of money will be forthcoming to carry on legitimate enterprise on this coast. By "perfect confidence" we mean the confidence begotten of fair and square dealing; an assurance, in other words, that legal quibbles will not be taken advantage of by exploiters or promoters to rob foreign investors. This is the only kind of confidence needed, which can never be attained, however, by law decisions which make by the labour agitation, which rather tends to establish the rule of equity and repress fraud. The London Bank of Utah is the latest evidence of a systematic investment of foreign capital in banking operations in what may be termed the extreme verge of the Pacific Coast region. It is doubtless the precursor of similar banking institutions by means of which the mineral and other material interests of the country will be developed.

Flagstaff, ⅜ to 1; a telegram has been received stating that the largest body of good ore in the Flagstaff Mine has been struck in the 5th level, 700 ft. north-west of the shaft, the lowest point of working in the mine. The output for the past month was 1500 tons, and the ore sales for 20 days of the same $22,200. The new machinery is working well. The shareholders may be congratulated upon this report. It was authoritatively stated that the property had passed irretrievably out of the hands of the company, but the above telegram has been received by the directors "from their manager." The sale would appear most opportune, as the new directors were only seeking to raise 3700*l.* for urgent requirements, whilst the sale represents 4440*l.* It is certainly extraordinary that so favourable a telegram should have been received at a moment when otherwise even the total collapse of the company appeared probable; the directors may be congratulated upon their good luck almost as much as upon their judgment. The ordinary general meeting has been convened for May 27, to be adjourned until the directors find themselves in a position to be able to inform the shareholders with regard to the result of the negociations respecting the judgments in Utah. The accounts for 1877 show a debit balance of 25,618*l.* 0s. 10d., but there are many extraordinary expenses on the expenditure side, such as 32,893*l.* 3s. 6d. for debts, bonus, and commission, and 11,093*l.* 1s. 4d. for interest, law, London, and directors' fees, travelling expenses, and so on. If ordinary working expenses only be put against the ore sales it shows a profit of 18,265*l.* 5s. 6d. The directors' report also states that by the agreements entered into with Mr. F. W. Billings in July last he was to pay or assume the debts and engagements of the company, then estimated at about 30,000*l.*, which included the amount agreed to be paid by Mr. Hunter on account of the South Star and Titus purchase; since which time other claims have been made against the company, most of which are disputed, and it is not yet known how much of them will have to be paid. The directors have been informed that the lessee (Mr. F. W. Billing) has assumed and claims to have paid on account of the company's indebtedness to Dec. 31 last about 23,850*l.*, which, with interest and other payments, amount to 27,772*l.* 14s. 3d., as shown in the balance-sheet, and which includes a sum of 14,128*l.* 8s. 3d. old debts under the Patrick management, but the directors have received no positive information as to the exact amount the lessee has assumed or paid. With regard to the special subscription loan, the directors announce that some 30 shareholders have liberally responded, and it is considered that a further sum of about 2000*l.* will enable the directors to effect their present purposes. Feeling that the exceptional terms offered should be confined to the shareholders alone, the board have determined to extend the time for subscribing to May 23, after which, in case of a sufficient sum not being made up, they will feel at liberty to accept the subscriptions from outside parties.

Richmond, 9 to 9½ xd.; the usual weekly telegram from the mine at Eureka states that the week's run was $80,000 from 1070 tons of ore. During the week the refinery produced $70,000. The manager is at Oakland (probably gone to college) for a fortnight, but he "hears frequently from the foreman of the mine, and his reports to him are very satisfactory. Everything is looking very well. As soon as he returns to Eureka he will forward a full report of all the working."

The advices from California refer to some important discoveries of gold in Shasta. One discovery, it appears, was made by three miners prospecting in the mountains; they found a rich quartz ledge on Flat Creek, and are now down about 23 ft., with the ledge 2 ft. wide. The ore is described as very rich. In this locality placer mining has been going on for years. The ground is being rapidly taken up and claims located by the citizens of Reading, who are carefully working them; and they do not wish the world to know much about their discovery until they are satisfied of its real wealth. It is claimed to be the same ledge running through Whisky Creek and Grizzly Gulch on the west and Churn Creek on the east, where in the last 20 days the miners have made a clean-up of $310. Next to the first and original location they are down 11 ft., and have struck some decomposed quartz, which, having been worked, pays from $10 to $16 to the "pan."

The latest advices from the "bonanza" mines state that the daily yield of the Consolidated Virginia is 600 tons of ore; the ore stopes from the 1500 ft. down to the 1750 ft. level are all yielding good ore. The daily yield from the California is 650 tons. Good ore is being taken from every breast from the 1500 ft. level down to the 1750 ft. level. The mills have lost but little time during the month, and the yield of bullion is fully up to the average amount. The Justice is shipping daily 180 tons, which keeps the Pacific mill steadily running. The Sutro Tunnel "header" continues in easy working Comstock vein matter, as at last report, composed of ledge porphyry, quartz, and clay, with no water. The whole has to be carefully and substantially timbered, and important ore developments are to be expected at almost any time, for the tunnel has arrived nearly to its destination (19,489 feet). Ground was first broken in 1869, and the average expense is $1000 per day. The men employed in driving the "header" are skilled workmen, many of whom worked for years in the Hoosac Tunnel, Massachusetts. The aggregate number of men employed in each of the three-hour shifts is 24. The most effective agency which during the past two or three years has revolutionised and greatly expedited the advancement of the tunnel is the drilling machine, driven by two powerful air-compressing engines; the drill carriage is 30 ft. in length, and very substantially built, armed with six 12 ft. Ingersoll steel-pointed octagon 1¾-inch drills. The din of this huge engine is such as to render conversation impossible for a distance of a quarter of a mile. The time occupied in drilling 12 holes averages about six hours in hard rock, and the harder the rock the faster relatively the rate of progress. The amount of giant powder consumed in 24 hours ranges from 150 lbs. to 200 lbs. Great caution is required in firing the blast, which is done by electricity. The tunnel is as straight as an arrow, and is a signal triumph of engineering skill. It is 10 ft. in width, and 8 ft. in height, with ample room for a double car track the whole distance. The grade is 3 inches in 100 feet. The successful completion of the undertaking may now be regarded as an assured fact, and the problem of what benefit it is to become to the Comstock will be solved ere long. Mr. Sutro is sanguine that the tunnel will greatly benefit the mining interests of the Comstock.

The Market for Hydraulic or Gold Washing shares has been steady during the week. The latest information from California speaks of rain and snow as still falling at intervals; this, it is thought, will cause a steady supply of water for the use of the mines through the coming summer months. Blue Tent, 3 to 3¼; a telegram announcing a clean-up at South Yuba claim with a return of $9000 has been received during the week. This makes $14,300 advised this month. From the report in another column it will be seen that everything is going on well. The company's canal is bringing down a large quantity of water. Birdseye Creek, ¼ to ⅜; washing is going on steadily with improved prospects for the remainder of the season.

Lead Mines without material change. Van, 20 to 21; there is no change reported from the mine. The various ends are looking well as usual, and the whole of the surface work is progressing satisfactorily. Grogwinion, 3 to 3½; the news from this mine continues of the most satisfactory nature. Several large shareholders have recently visited it, and expressed themselves pleased with its prospects. Wye Valley, 1½ to 2; the 22 fm. level winze is still looking well, and the other eastern workings give promise of early discoveries. West Wye Valley, 2 to 3; these have been rather offered for sale, but the accounts from the mine are good, and a further parcel of ore has been sampled for market. Caron, 2 to 2½; two of the directors have just visited the mine, and they report that great and satisfactory progress is being made with all the works. Saint Harmon, 2½ to 3½; prospects continue good at all points, and the south cross-cut is approaching very near to the lodes, with excellent indications of good discoveries. The bottom levels also show well for early discoveries, and the lode is large and masterly. Red Rock, 2 to 2½; it is reported that this mine has again improved in the deep levels. South Cwmystwith, 3 to 4; the workings are going on well and making good progress.

It will be gratifying to capitalists interested in the lead mines of the West Riding of Yorkshire to learn how fully the official returns to the Government Inspector establish the enormous mineral wealth of the district. During 1877 the total quantity of lead produced in the district was no less than 1069¼ tons, the value of which, even at the present low price of lead, would be about 18,000*l.* The mines contributing to make up this quantity were:—Appletreewick, 470 tons; Birkhill, 13½ tons; Grassington, 290 tons; Gravel, 31¾ tons; Pateley Bridge, 157 tons; Silver Lake, 2¼ tons; and West Craven Moor, 100 tons.

Pateley Bridge, 2½ to 3; the Rake vein, in the 30 east, continues to be worth 4 tons of lead ore per fm. Other parts of the mine unchanged, and producing as usual. A special meeting of the company was held on Monday; full particulars will be found in another column. The great importance of the late improvement and the good prospect for future success at an early date should cause the shareholders to take more interest in their valuable property, and support the board in their endeavour to put the company in a sound position. West Pateley, 2 to 2½; the various points of operation are without special change, although the North Rake vein, in the 20 east, has increased to 5 ft. wide, and produces good patches of lead, and in the 32 (which have just commenced to be driven) the same vein is described as being in both ends of a very promising appearance. On the Craven Cross vein driving will be commenced on Monday from the bottom of the winze below the 56. The manager says, "The vein still maintains its size and value, and judging from the long run of ore in the level above our prospects at this point are very encouraging indeed."

Subjoined are the closing quotations:—

Assheton, ¾ to 1¼; Carn Brea, 39 to 41; Devon Great Consols, 2½ to 3; Dolcoath, 29 to 31; East Caradon, ⅜ to ⅝; East Van, 4½ to 5; Glyn, ⅝ to ⅞; Great Laxey, 18 to 20; Hingston Down, ⅛ to ⅜; Leadhills, 3½ to 4; Marke Valley, ⅜ to ½; Parys Mountain, ⅜ to ½; Pateley Bridge, 2½ to 3; Penstruthal, ⅛ to ¼; Roman Gravels, 7½ to 8; Rookhope, 17s. to 19s.; Tankerville, 3¾ to 4¼; Tincroft, 10 to 11; Van, 19½ to 20; West Assheton, ¾ to 1; West Pateley, 2 to 2½; West Chiverton, 9 to 10; Wheal Grenville, 3¼ to 3¾; Almada and Tirito, ¼ to ⅜; Argentine, ⅛ to ⅜; Birdseye Creek, ¾ to 1; Blue Tent, 3 to 3¼; Cape Copper, 28 to 30; Cedar Creek, ⅛ to ⅜; Chontales, ½ to ⅝; Colorado Terrible, 2¾ to 3¼; Don Pedro, 14s. to 16s.; Eberhardt and Aurora, 6¾ to 7¼; Emma, ¼ to ½; Exchequer, 1s. to 3s.; Flagstaff, ⅞ to 1⅛; Frontino and Bolivia, 1¾ to 2; Hultafall, 4½ to 5½; I.X.L., 1-16th to 3-16ths; Javali, ¼ to ⅜; Kapanga, ⅜ to ⅝; Last Chance, ⅞ to 1⅛; New Quebrada, 1⅜ to 1¾; Pestarena, 3-16ths to 5-16ths; Plumas Eureka, 2⅝ to 2⅞; Port Phillip, ½ to ⅝; Richmond Consolidated, 9 to 9¼, ex div.; St. John del Rey, 305 to 315; Sierra Buttes, 1¼ to 2; South Aurora, 4s. to 6s.; Tecoma, ⅛ to ¼; United Mexican, 2¼ to 2¾.

COLLIERIES.—A few transactions have taken place in these shares during the past week, but no particular change in prices is noticeable. Trade in some districts continues to wear an improved aspect, particularly where steam and gas coal are produced, while on the other hand, with a few exceptions, house coal collieries are dull, though prices have not materially fallen. Exports still show a remarkable growth, those for the week ending the 4th instant being 288,976 tons, as against 279,947 tons for the previous week. Coke and patent fuel shipments also show an increase. The Chapel House Colliery is doing an increasing trade, the output being well kept up, and indeed slightly enlarged, while great progress has been made with the new machinery, which, when complete, will enable an output of 1000 tons per day to be raised. The completion of this machinery is promised for next month, and it is hoped, therefore, than an increased raising may be obtained by the date on which the general meeting will be held. Chapel House shares are very firm at 3¾ to 3¾, and in consideration of their excellent prospects they are likely to have a sharp and large rise before long.

The shares of the Yniscedwyn Company give every promise of proving a good investment. The company's property is the largest in South Wales, and contains coal of great thickness, one seam being nearly 18 ft. thick, and excellent quality, besides great quantities of fire-clay and iron and lime stone. The coal and iron yield the highest prices in the market, and are of such a quality as always to ensure a ready and rapid sale, even in times of depression. An output of 2000 tons of coal can be obtained per day, while the iron furnaces (which have cost 50,000*l.*) are capable of yielding 300 tons of iron per day, worth more than the usual market price, while the cost is little, if at all, more than the usual average. The situation of the property, within 14 miles of Swansea, gives it an advantage over all others as regards markets, and the unusually low rates of royalty enable the company to get their coal at something like 1s. per ton less than the average cost of the neighbourhood. The company's agents in South Wales are stated to have numerous orders on their books for this coal at prices which will yield a profit of 2s. per ton an excellent profit for such times as the present.

With a capital of only 60,000*l.*, and possessed of a property on which a sum of about 250,000*l.* has been expended, and with the great advantages as to locality and means of transport, it would certainly appear that this company is bound, with the most ordinarily good management, to be a very prosperous concern; in fact, notwithstanding the depressed condition of trade, it is estimated that dividends may be at once anticipated at the rate of 14 per cent. The various levels in the main seam at Alltami continue to open up in a very satisfactory manner, the coal being of good quality, and free from dirt. Alltami shares close at 3¼ to 4; trade is brisk at Llay Hall, the shares of which are at 6 to 8; New Sharlston, 3¾ to 4¼; Newport Abercarn, 4 to 4¼; Thorp's Gawber, 2¼ to 2¾; Cardiff and Swansea, ½ to 1.

Petitions have been presented to the High Court of Justice for the winding-up of the Loughor Colliery Company, the Banbury and Cheltenham Direct Railway Company, the Thames Steam Ferry Company, and the Carbon Fertiliser Company.

*** **With this week's Journal a SUPPLEMENTAL SHEET is given** which contains: Original Correspondence; New South Wales Minerals—Paris Exhibition (R. D. Adams); Mining in Colorado—Park County—No. V. (C. S. Richardson); the Gold Mines of Minas Geraes, Brazil; an Examination into the Position and Prospects of Certain Mines, No. V.—Rio Tinto (W. Gabbott); New Quebrada Company (B. Symons); Patent Combination Rock-Drill (Edwards and Co.); Rock-Drills—Proposed Competition (G. Cook); Geological Museum—Abuse of Privilege; Coal Washing (M. G. Morgans); Reminiscences—No. IV.; Assheton and West Assheton Lead Mines; Mining in North Wales—Pant y Mwyn; the Five-weeks Month; Devon Great Consols (R. Symons); Wheal Peevor Champagne Dinner; Government Inspection of Mines; the Paris International Exhibition—No. 1; Foreign Mining and Metallurgy; Registration of New Companies; Foreign Mines; the Almada and Tirito Consolidated Silver Mining Company (Limited); Meetings of Pateley Bridge, West Chiverton, Cathedral, East Caradon, East Chiverton Companies, &c.

SOUTH DARREN.—The 90 end has improved to 30*l.* per fathom. The winze below the 90 is worth 50*l.* per fathom. The 100 west of winze is worth 10*l.* per fathom. No. 1 stope in the 90 is worth 24*l.* per fathom. No. 2 stope is worth 28*l.* per fathom. The 80 end is worth 4*l.* per fathom, and likely to be better. The new stope in the 80 is worth 24*l.* per fathom. No. 2 stope is worth 10*l.* per fm. The 40 tons for the month realised 643*l.*

WEST TANKERVILLE.—There is a most important discovery at this mine, the drift and rise above the 70 fm. level being worth 4 tons of lead ore per fathom, and it is hoped that this part of the lode will be found standing by the side of the 63.

BODIDRIS.—We hear this mine has considerably improved at all points, and especially at the 30, where a good course of ore is being wrought upon. It is stated a powerful engine is at once to be erected upon the Craigiog portion of the company's property, after which the returns of lead will be materially increased.

EUROPEAN-AMERICAN ASSOCIATION.—It is understood that Messrs. F. W. Mansell and Co., financial agents, of Palmerston Buildings, E.C., as European representatives of the above-named association (which, as stated a few weeks since, is formed of some well-known Transatlantic millionaires), have just successfully concluded negociations with some leading continental bankers for the sale of a property in Montana. It is described as a valuable treasure of deposit—a shaft has been sunk 50 ft. deep, and out of this more than 350,000 have been mined. The metal is gold, and the ore does not fall below $800, and much of it is above $1000 per ton.

LEAD ORES.

Date.	Mines.	Tons.	Price per ton.	Purchasers.
May 11	South Darren	40	£14 1 6	Adam Eyton.
	—Herodsfoot	45	14 10 0	—

BLENDE.

Date.	Mines.	Tons.	Price per ton.	Purchasers.
May 13	Pandora	35	£ 1 11 6	Swansea Vale Spelter Co

PERUVIAN TIN ORE SOLD IN LIVERPOOL.

Date.	Tons.	Price per ton.	Purchasers.
May 15	11	£32 15 0	T. Bolitho and Sons.
	10	32 15 0	Williams, Harvey, and Co.
	7½	31 5 0	Daubuz and Co.
	6½	31 5 0	R. R. Michell and Co.
	6¾	32 5 0	Redruth Company.
	4¼	30 15 0	Calenick Company.

ZINC ORES.

ARMAND FALLIZE,
INGENIEUR-CIVIL, A LIEGE (BELGIUM),
BUYER
1.—CARBONATED AND OXYDED ZINC ORES (CALAMINE, &c.)
2.—ZINC AND LEAD ORES MIXED TOGETHER, BUT DRESSABLE KINDS ONLY

CAPPER PASS AND SON, BRISTOL

PURCHASERS OF
LEAD ASHES, LEAD SLAGS, SULPHATE OF LEAD, HARD LEAD, BRASS SLAGS AND ASHES, COPPER REGULUS, MATTE, SCORIA, TIN ASHES, TERNE ASHES, &c., and MIXED ORES or REFUSE, containing LEAD, COPPER, TIN, or ANTIMONY.

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EXECUTE COMMISSIONS FOR THE PURCHASE AND SALE OF SCOTCH PIG-IRON WARRANTS.
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SPEAR AND JACKSON, Etna Steel Works, Sheffield; and JOHN SHAW, Yorkshire Wire Rope Works, Sheffield.
Steel and Steel Tools, Pig and Manufactured Iron, Hemp and Wire Ropes for all purposes, Indiarubber Goods, and Furnishings of every description for Collieries, Founders, Engineers, Saw-millers, &c.

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ASBESTOS.

THE BEST MATERIAL for the STEAM JOINTS of LOCOMOTIVES, MARINE and STATIONARY ENGINES BOILERS, &c.
It is manufactured entirely pure, and of the best and strongest qualities, into MILLBOARD, for STEAM, WATER, GAS, and ACID JOINTS,
Further particulars and prices of the undersigned,
SMITH, FLEMING, AND CO.,
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Exhibition Prize Medal—New South Wales, 1877.

AUSTRALIAN TIN—"KANGAROO" BRAND.

Having recently succeeded in REFINING the AUSTRALIAN TIN to the HIGHEST PITCH OF PURITY, the Undersigned is prepared to SUPPLY an article equal to the BEST REFINED ENGLISH.
The uniform assay of the "Kangaroo" brand ranges from 99·70 to 99·90 pure tin. An exhaustive comparative trial of various brands of Australian tin (see annexed report) have proved the
"KANGAROO" BRAND
To be superior to all other Australian tin, and equal to best refined English.
COPY OF REPORT.
"Sydney Galvanising Works, Sydney, Oct. 1, 1875."
"DEAR SIR,—I have much pleasure in stating that I have found the tin smelted at the 'Kangaroo' Tin Smelting Works superior to any other Australian smelted tin I have used in my business up to the present time, and in no way inferior but quite equal to the celebrated 'Lamb and Flag' tin.
This opinion has been arrived at after several carefully executed practical tests, as well as from metallurgical assays.
"I am, dear Sir, yours faithfully,
"S. L. Bensusan, Esq." (Signed) S. ZOLLNER."
Messrs. JOHNSON, MATTHEY, AND CO., the well-known Assayers, report on 24th December, 1875, on a shipment ex Durham, 25 tons of "KANGAROO" TIN, 99·95 per cent. pure tin.
In ordering the "Kangaroo" brand the trade will henceforth ensure uniformity of quality, excellence of texture, and absolute freedom from impurity
"KANGAROO" TIN SMELTING WORKS.
Sydney, September, 1877. S. L. BENSUSAN.

NORTH WALES.	SOUTH WALES.
CORNWALL.	DEVON.
SHROPSHIRE.	LINCOLN.
DURHAM.	NORTHUMBERLAND.
LANARKSHIRE.	FRANCE.
TURKEY (EUROPE).	TURKEY (ASIA).
STRAITS OF MALACCA.	JAVA, &c.

A PRACTICAL MINE INSPECTOR, who has Surveyed and Reported on Mines in the above places, is prepared to REPORT on MINERAL PROPERTY.
Address, "Miner," Dennis Rock and Co., Metal Brokers, 46, Leadenhall-street, London.

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Mr. THOMPSON affords reliable information to investors, and can give, when desired, a list of first-class Stocks and Shares, yielding 4 to 10 per cent. dividends upon present prices.—Mr. THOMPSON'S weekly Circular may be had on application.

WEST TANKERVILLE MINE.—ONE HUNDRED SHARES TO BE SOLD, at 11s. 6d. per share.
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MESSRS. JONES AND HOUSTON, 25, CROSBY HALL' CHAMBERS, BISHOPSGATE STREET WITHIN, LONDON, E.C.
A reaction from the late depression in the Market for Mines having set in, we are prepared to point out to our clients those Investments which are likely to be early and favourably affected. Several of these are included in the List given below, and in all of which WE ARE prepared to do business:—

Aberduanant, 7s. 6d.	Grrgwinion, £3 5s.	Rookhope, £18.
Bodidris, 24s,	Hultafall, £3 17s. 6d.	South Aurora, 5s.
Cardiff and Swan., 14s.	Leadhills, £3 15s.	Tankervtlle, £4.
Chapel House, £3 5s.	New Quebrada.	Tyn y Fron.
Don Pedro (Gold).	North Laxey, 2s. 6d.	Wye Valley, £1 13s. 6d.
East Van, £4 7s. 6d.	Pateley Bridge.	West Tankerville, 12s.
Flagstaff, £1.	Penstruthal, 4s. 6d.	West Chiverton.
Frontino.	Port Phillip, 12s.	Wheal Newton (Silver), £4 5s.
Gorsedd & Merll., £4¼.	Pary's Mountain, 8s. 6d	
	Richmond, £9¼.	

The advice given in our advertisement a fortnight since to purchase Don Pedro shares for a rise has proved very successful, the shares having advanced from 11s. to 18s. within a few days. Another favourable opportunity presents itself in a Lead Mine, in £1 shares, fully paid, as yet only at a comparatively small premium, in which investors should lose no time in securing an interest.
Daily Price List on application.—Bankers: London and Provincial.

MR. GEORGE BUDGE, STOCK AND SHARE DEALER,
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Published EVERY FRIDAY EVENING. Post free for 3 months, 2s. 6d.
The "INVESTORS' GAZETTE" contains a *resume*, as brief and concise as possible, of the prices on the Stock Exchange and Mining Market for the week, and latest intelligence from Mines in all parts of the world.
The "INVESTORS' GAZETTE" gives the lowest net prices at which MINING and OTHER SHARES can be purchased.
Edited and published by—
ALFRED E. COOKE, 76, OLD BROAD STREET, LONDON

Notices to Correspondents.

*** Much inconvenience having arisen in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be *filed* on receipt; it then forms an accumulating useful work of reference.

CHLORIDE OF ZINC.—Can anyone kindly state if chloride of zinc is a refuse product in any manufacture, and if it can be had cheap? Also, nature and composition of Peacock's composition or paint for coating ships' bottoms, and if patented?—C. H. A.

DYNIN SLATE QUARRIES.—I shall esteem it a great favour if any of your readers can give some information respecting this property, which has been highly recommended by some London brokers. Perhaps the secretory will state what is doing at the works, and if the debentures are all taken up?—ENQUIRER.

THE TIN MINES OF TASMANIA.—We regret that a pressure on our space compels us to postpone until next week's Journal the letter from Capt. Wm. Tregay on the Tin Mines of Tasmania.

IMPORTANT NOTICE—REDUCTION OF POSTAGE ON THE "MINING JOURNAL."—In consequence of the new POSTAL CONVENTION, which came into operation on July 1, the postage of the *Mining Journal* to many countries will be reduced to one-fourth. Henceforth the subscription will be 1*l.* 10s. 4d. per annum (39 frs.), postage included, for the following countries. The amount will, if desired, be collected at the subscriber's residence at the end of each year. The subscription continues until countermanded:—Austria, France, Belgium, Denmark (including Iceland and the Faroe Islands), Egypt, Germany, Gibraltar, Greece, Heligoland, Italy, Luxemburg, Netherlands, Norway, Portugal (including Madeira and the Azores), Roumania, Russia, Servia, Sweden, Switzerland, United States, Malta' Turkey, Morocco, Tunis, and the Canary Islands. Spain 1*l.* 19s. (50 frs.)

MINERA.—In last week's Journal Minera were quoted 16*l.* to 18*l.* As the shares were then and now offering at 11*l.* and under on the Mining Market I think it right to call attention to the erroneous quotation.—J. B. BRENCHLEY: *May* 16.

THE SUPPLEMENTARY SHEET.—We have received occasional complaints, and of late a good many, that the Journal is delivered by country booksellers without the Supplement. Subscribers would oblige us by demanding that the paper should be handed to them complete, as every Journal is accompanied by the Supplement when it leaves our office, and the fault of omission must rest with the country bookseller or their London agent.

Received,—H. T. Bond (Ballarat)—"C. S. R." (Almada, Colorado)—"Shareholder" (Flagstaff)—"Constant Reader" (Devizes)—"M. N." (Truro): We could not publish such a statement, as we have reason to doubt its accuracy—"L. D" (Birmingham)—"Shareholder" (Wheal Coates)—"Old Reader" (Dolgelley) could hardly have intended his letter on Welsh Mining for publication—"Shareholder" (Devon Great Consols)—"H. C. M."—"Shareholder" (New Bronfloyd).

THE MINING JOURNAL,

Railway and Commercial Gazette.

LONDON, MAY 18, 1878.

OUR EXPORTS OF IRON, STEEL, AND COAL.

The Board of Trade Returns showing the extent and value of our exports for the last four months, so far as relates to iron, steel, and coal, are satisfactory with respect to weight, but certainly not as to price. Railway iron in particular looks well, for up to the end of April the exports were 156,144 tons, against 100,177 tons for the corresponding period of 1877. British India has been our best customer, there having been sent there during the present year 44,236 tons, as compared with 21,628 tons in the same period of 1877. Australasia is also fast extending her railway system for the development of the vast resources of that country, and this year so far has taken 29,594 tons from us, being 10,405 tons in excess of what was exported in the corresponding months of last year. Singular to say, Germany with its vast iron and steel works has been an unusually heavy purchaser from us in railway material of late, being credited for the last four months with 23,584 tons, the corresponding export of last year having been only 973 tons. This circumstance is certainly a most noticeable feature in the history of our exports, for it clearly shows that England can now hold her own against continental manufacturers. Nay more, for they appear to be in a position to sell at a lower price than Belgian, French, or German manufacturers can even in their own markets. Bessemer rails made in England are now being delivered as low as 6*l.* 8s. and 6*l.* 10s. per ton, and in some instances we believe even lower than that. The cause of this is certainly the low rate of wages that prevails in our manufacturing districts, and the very easy terms on which smelting coal can now be purchased. These no doubt are evils in themselves, but they at least find employment for some thousands of hands that under the opposite circumstances in all probability would be entirely idle. The profits on BESSEMER rails must be trifling indeed, but makers are willing to sacrifice at present in the expectation that they will secure certain markets that in the future will turn out profitable. In hardware and cutlery the value of our exports this year has been about 5 per cent. in excess of those of last year, which is certainly not a great deal, and shows that those two branches are still in a depressed state. Coal has been in very good request for consumption abroad since the year set in, and during the last month in particular Russia has taken largely, especially in steam qualities, so as to stock for naval purposes, and be prepared for whatever may arise, either peace, or the prohibition on the part of our Government as to the sending of coal to Russian ports. The total quantity sent away during the four months of the present year was 4,484,343 tons, against 4,309,509 tons as compared with 1877, or an increase of 174,834 tons. The quantities sent during the first four months of 1877 and 1878 were respectively Russia, 135,815 tons and 168,266 tons; Sweden and Norway, 226,995 tons and 273,055 tons; France, 961,580 tons and 1,041,102 tons; Italy, 315,940 tons and 372,226 tons. On the other hand a less tonnage was taken by Denmark, Turkey, Holland, and British India. Germany, as we have frequently pointed out, is doing all she can to be less dependent on England for fuel than she has been hitherto, and the colliery-owners are working as hard as they can in the same direction. The consequence is that for some months past there has been a gradual falling off in the quantity of coal sent to German ports, so that whilst in the first four months of 1877 our exports to that country were 452,846 tons of coal, during the present year they have declined to 394,844 tons. Our own Government this year has materially helped to swell our exports of coal to Malta, the quantity sent there up to the end of April having been 156,625 tons, against 118,313 tons for the same period of 1877. In conclusion, it may be said that whilst the value of the coal exported from this country in April, 1877, was 10s. 3d. per ton, last month it was only 9s. 6d. per ton, a reason probably for the increase in the tonnage of coal sent this year to some parts of the Continent.

DETONATOR EXPLOSION.—The report of Major V. D. Majendie, R.A., Chief Inspector of Explosives, upon the accident which occurred in the detonator factory of the Cotton Powder Company, near Faversham, on Feb. 12, by which a man and a boy were seriously injured, has just been issued. After giving the details of the enquiry, it may, Major Majendie thinks, be fairly concluded that the occurrence was the result of an unfortunate accident, and may be attributed either to the explosion by friction or otherwise of some detonating composition in or about the pressing-machine, or to the explosion of a detonator which had fallen from the boy's hand across a hole by the descent of the piston upon it; the explosion in either case having extended to other detonators and composition in the building. And of these two causes, he thinks the second decidedly more probable. He does not find that there was any violation of terms of the license, unless the insufficiency of the screen or partition to protect people in one compartment from an explosion in the other be regarded as a non-observance of the proviso appended to the permission to employ three workpeople in the building. It is, no doubt, clear now that the protection was insufficient, but at the time the shed was erected and arranged they deemed the screen a "reasonable security" against extended damage. He is bound to say he does not think this point could be properly pressed to the prejudice of the company, and (if he excepts the absence of the calico sheet) in regard to all other matters—the amount of explosive present, the number of workpeople, the clothing, shoes, and, so far as he could discover, general observance of the regulations—he is of opinion that there is no cause for complaint; and, as he does not believe that the accident was due in any way to the absence of the sheet, he comes to the conclusion that it has neither been directly caused nor aggravated by any shortcomings of the company or their servants on these heads.

MINE INSPECTORS' REPORT.—The usual tabulated summary of the official reports of H.M.'s Inspectors of Mines, which have just been issued, will be found in the Supplement to this day's Journal. The number of deaths resulting from colliery operations in 1877 was 1208, against 933 in 1876. The total output of coal was 134,179,968 tons raised by 494,386 persons in 1877, against 134,125,166 tons raised by 514,532 persons in the preceding year. During 1877 one life was lost for each 409 persons employed, and in 1876 the deaths showed one life lost for each 551 persons employed. During 1877 one life was lost for each 123,217 tons of mineral raised, whilst in 1876 the figures showed one life lost for each 159,688 tons raised. The averages are seriously affected by the lamentable accident at Blantyre, resulting in the death of 207 person. This is the greatest number of lives that was ever lost in Scotland in a colliery accident. The next largest was at Nitshill in 1851. The interesting details given in the several reports will, as usual, be referred to in subsequent Numbers of the Journal.

VENTILATION OF COAL MINES.—John Simpson and James Glaisher agent and certified manager of Messrs. Bain and Co.'s coal pits, Harrington, were charged on Thursday, at the Whitehaven Police Court, by Mr. Ellis, Government Inspector of Mines, with not having an adequate amount of ventilation in No. 7 pit, Harrington, to dilute and render harmless the gas therein. Mr. Atkinson, Inspector of Mines, proved the charge. On going into the pit he found gas there. The mine was not properly ventilated. Mr. M'Kelvie, who appeared for the defendants, admitted that there was gas in the pit, in consequence of a slight defect of ventilation, but added that the defect had been remedied. The defendants were fined 10*l.* each. Two informations charging them with another offence under the Mines Act were withdrawn.

ALMADA AND TIRITO MINES.—An interesting report and telegram from these mines will be found in another column of this day's Journal, bringing down the information to April 24. The company has been working under great disadvantages since last June, when the incendiary fire occurred. Since that unfortunate event the whole of Northern Mexico has been visited with a severe drought. This has entirely prevented the company working the Tirito at the bottom levels. Notwithstanding these drawbacks the mines have been carried on without serious loss, and on the rainy season arriving, which will be due next month, it is believed that a great change for the better will occur. The new machinery of the Virgen lode east of the Providencia is still looking well, the company raising rich black ores from three points—the tunnel level 7 fms. above that level, 40 fms. below. The Mina Grande is decidedly improving, and ore is being raised from near the Dios Padre boundary. Good green ore is also being extracted from the extreme southern end of the Tirito north of the south slide. As soon as the raining season begins the company will continue the exploration to the point under the Soledad, from which the present tunnel end was at the latest date only about 7 fms. The telegram just received and appended to the report sums up the position by saying "mine improving."

TREATMENT OF PEAT MATERIAL.

Although the suggestions from time to time brought forward for the preparation of peat have been so numerous that it is unlikely any inventor at the present time could offer anything really novel, but as it was mentioned in last week's Journal that Mr. HOWARDS' process was about to be tested at Dartmoor, a description of it may not be uninteresting. The object of the invention is to crush the raw peat material, so as to eject a large portion of the water and air contained therein by means of an improved arrangement of machinery for that purpose; to separate by an improved mechanical arrangement a portion of the water and air which peat is generally found to be associated with in its native condition; to consolidate or compress the peat material, and force it into a convenient shape by means of machinery for that purpose; and to evaporate the remainder of the air and moisture contained in the peat, and by disintegration or treatment to convert it either into a fuel, or otherwise treat it by means of an improved apparatus for this purpose.

In order to crush raw peat material in accordance with his improvements a mill consisting of a pair of revolving rollers is employed, over which is placed a shute; the peat is thrown into the shute, and passed between the rollers, which may be round or octagonal in form, fixed on a level or on an inclination, and by a suitable arrangement they are caused to revolve so as to effect a squeezing action on the peat, such action being guided by the distance the rollers are set apart from each other, which distance may be regulated by a screw or equivalent means. The peat, after passing through the rollers, is forced down by the revolving action into a receptacle fixed below the rollers on an incline, there being various outlets or apertures in the front of and on a level with the bottom of the receptacle, which bottom is formed on an incline from the centre to both sides, like a saddle, ending throughout on each side in a groove or gutter from end to end with an outlet to allow the water, which falls from the peat, by reason of its inclination, to pass away.

In the receptacle there is a movable partition, to which is attached a rod or reciprocating slide passing through an aperture at the back. This rod or slide works forwards and backwards alternately by a suitable arrangement from a revolving crank outside. Each time the crank revolves it presses forward the rod or slide and movable portion in the form of a ram, and this action compresses the peat, and forces it out of the apertures in front of the receptacle. The peat is next placed on the shelves of an improved apparatus for effecting the evaporation of the remainder of the moisture. This apparatus consists of an upright shaft to which is attached, at equal distances apart, shelves constructed of iron, wire, or other suitable material; the upright shaft is fitted by pivots working into sockets fixed into a frame of suitable dimensions. The shaft revolves in the frame, causing the shelves to rapidly pass through the air by means of suitable mechanical arrangement fixed to the same for that purpose.

Another somewhat similar process has been invented by Mr. THOMAS BARROW, of Rock Ferry, Cheshire, which consists in drying peat which has been first disintegrated and masticated by causing the same to pass through by means of screws or worms a series of open troughs or gutters which discharge one into another, and are placed over a suitable flue or furnace. The troughs discharge the peat into a hopper or pipe which feeds a series of charring pipes provided with screws or worms, and placed over or in connection with a suitable furnace. The charring pipes are by preference arranged one above the other, and are provided alternately with right and left handed screws or worms, the ends of the pipes being connected by elbow pieces, so that the peat drawn by the screws in one pipe is discharged through the elbow into the next pipe, through which it is drawn by the reverse screw, and so on through the series. The screws are mounted on suitable shafts which run in stuffing boxes, and are driven by any suitable gear. The drying troughs and the charring pipes are by preference fitted over one furnace common to both. The furnace is provided with a door at each end, and rails, on which run trucks, being the fire-grates, the trucks with fresh fuel being fed at one end, and the burnt-out trucks removed at the other end, or in lieu of the trucks ordinary fire-bars may be used, or an endless band furnace.

The charring pipes are provided with baffle plates, dividing the furnace into a series of flues, over the upper of which are placed the drying troughs. The charring pipes are also provided with steam and gas escape pipes, leading to a suitable condenser. From the charring pipes the peat is discharged into a receiver, and on to a rotating disc, provided with dies of suitable form. The disc rotates over or against a table, and the stamper which presses the peat into the dies consists of a lever, one end of which is weighted, and the other provided with a stamping piece of wood or metal, and also a discharging piece. The stamper presses the peat into the die as the disc passes over the table, and the discharger afterwards forces the pressed peat through the die or hole. The stamper may be worked by any suitable mechanism, and the disc may be horizontal or vertical. One or more stampers may be fitted in connection with each disc. For cooling peat charcoal he passes it through a series of pipes immersed in water, the motive agent being a worm or screw working in such pipes. When it is required to pulverise the peat charcoal such can be done by passing it between suitable rollers.

REPORT FROM CORNWALL.

May 16.—There is really nothing in the general aspect of mining matters that calls for comment. Dulness appears to reign supreme, and there is no appearance of activity or relief save in the proposals that are being made to rework some promising copper mines, to which again attention is being turned. The prices of metals remain pretty much where they were, though there have been some indications of a little hardening.

An illustration of the really practical and valuable work that the Mining Institute is doing is supplied by the returns of black tin raised and sold, which are compiled by Mr. Provis, the secretary. In April it seems that 888 tons 2 cwts. 1 qr. 23 lbs. were sold from the following mines:—Wheal Agar, Wheal Basset, West Basset, Blue Hills, Botallack, Carn Brea, Combellack, Comford, South Condurrow, Cook's Kitchen, Dolcoath, West Frances, Wheal Grenville, Wheal Jane, Wheal Peevor, Penhalls, Penstruthal, Phœnix United, East Pool, Tincroft, Uny, and Tin Streams. The production is evidently keeping up well.

The efforts which were made to bring the unfortunate difference at Devon Great Consols to a settlement have failed. Mr. Morris, the resident director, who had gone to London with the intention of doing what he could to produce this result, returned with full powers to assure the tutwork men that if they worked a five-weeks month they should be paid for the extra week, no advantage being taken in the price of the setting. In accordance with this decision Mr. Morris, with Capt. J. Richards, met the miners who had objected to work under the five-weeks month system at the account-house, Wheal Josiah, on Saturday, for the purpose of conveying to them the terms of the proposal. There were about 100 of the miners present out of the 150, and, on Mr. Morris noticing this fact, one of the workmen replied that they represented the whole number. Many of the absentees, however, amongst whom are the most able miners, have obtained different employment, while others have left the district. The effort failed simply because the miners declined to trust the directorate at a distance. In their own words, while they had every confidence in Mr. Morris and the agents, there were gentlemen connected with the mine, who resided several hundred miles away, whom they did not care to trust. This augurs very badly for an amicable settlement of the dispute, and another point to be taken into consideration is that the offer made did not apply to the "monthly men." Of course it is understood that the agents' salaries are to be reduced, but unless the ordinary monthly men are to be placed on the same footing as the tutworkers the return to the five-weeks month will cut down their wages also. Now Mr. Morris has failed to induce a settlement, an extension of the strike may be anticipated. So far it has been confined to Wheal Emma, or what is known as the eastern division of the mine. But from here the largest proportion of copper ore and arsenic was obtained, so that the 150 miners who ceased work three weeks since have of necessity stopped another 150 persons who were employed at surface. On Saturday next those engaged at Wheal Maria, Wheal Fanny, Wheal Anna Maria, and Wheal Josiah, which comprise the western portions will have completed their bargains, and another 500 miners will then probably follow the example of their comrades. This will bring about the enforced idleness of almost everyone engaged on the workings. This is a very serious matter, and one which will have to be taken carefully into consideration. It is held in the district to be very doubtful if the men could be adequately replaced. On the other hand, it is said the men would be quite content to submit to reduction in pay if that were not accompanied by the return to the five-weeks month.

The latest freak of the Post Office is to refuse to carry samples of china-clay, because of the "danger to its officials!" A little learning would do these gentlemen good. But what delicate creatures they must be. If there is one thing more innocuous than another, china-clay is that thing. Perhaps they think it is a polite name for arsenic.

REPORT FROM DERBYSHIRE AND YORKSHIRE.

May 16.—Business of every class in Derbyshire, like that in most other counties, is very quiet, and what is worse there are no signs of any improvement likely to take place. One of the oldest industries—indeed the oldest—lead mining, which was followed in the county by the Romans, has been on the decline for some years, so that the production altogether is not equal to that of one mine in North Wales. Yet no one supposes that the ore has been worked out, for at some places within the last three or four years large quantities were raised, but now very few people indeed ever think of investing in the lead mines of Derbyshire, for several of the companies have turned out unfortunate, but not altogether in consequence of the dearth of lead as from other causes. The managers do not appear to have had that energy and go-ahead which characterises those in many districts, whilst reports from them as to what has been done with probable results have been altogether unknown. Another drawback has been the want of railway facilities, for many mines are a considerable distance from any line, so that there is a heavy expense in importing all the requisites for mining operations. But with all these drawbacks there is no doubt but lead mining could be made to pay in Derbyshire if there was good machinery and appliances and able management, for labour is very cheap in the lead districts. It is different in those localities where there are collieries, for in connection with them there are railways and sidings and every facility for transporting the coal to distant markets. The consequence is that Derbyshire sends more coal to the London market by railway than any other county in the kingdom, the Midland of course taking by far the largest share. During the past month the trade with the Metropolis, so far as Derbyshire is concerned, has been very fair indeed for the time of year, although prices to consumers have recently dropped 1s. per ton. Steam coal has been in slightly better request as we are now entering upon the active season, but the exports as yet have not been so large from the Humber ports as might have been expected. In other descriptions of coal there has been but little change, engine fuel and slack being anything but easy to dispose of. Quietness is still the ruling feature in connection with the iron trade. The make of pig has been kept up to the average, and the foundries tolerably well going in ordinary castings.

At the Dodworth Silkstone Colliery the men are still on strike, but a goodly number of non-Unionists are employed, greatly to the annoyance of the old hands, so that a collision between the two bodies is not unexpected, and the police are kept on the *qui vive*. On Tuesday there was a meeting of the men on strike near the colliery, when the manager was denounced in anything but Parliamentary terms.

No change for the better has taken place in the Sheffield trades, and most of them are in a decidedly depressed condition. The Bessemer rail trade of course keeps up well, and is likely to do, but the prices at which contracts have to be taken do not leave much margin for profit. There has been quite a drop in the shipment of most qualities of cutlery, not only to our own colonies, but to other countries as well. Ship and boiler plates have been in tolerably fair demand, but little is being done in heavy ones. The extensive building operations going on in all directions have given an impetus to the trade in stoves and grates and general house castings, but there is not much doing in heavy work. Mixed plates of iron and steel for armour-clads are now attracting a good deal of attention, and there promises to be an exciting race on the part of the makers of them for the favour of the Admiralty. Brown's, Cammell's, and Whitworth's appear to be the competitors, and from the high repu-

tation of these firms there can be little doubt but that plates will be made that will be of far greater tenacity than those made of wrought-iron. The South Yorkshire Coal Trade has undergone little change of late, and the collieries are working in most instances four days a week, but several are able to give their workmen five days. Steam coal does not go off quite so briskly as might be expected, whilst prices of all qualities of fuel are very low.

ADMIRALTY EXPERIMENT WITH A SHFFIELD ARMOUR-PLATE.—On Tuesday an armour-plate, manufactured by Messrs. Cammell, of Sheffield, was experimented upon by order of the Admiralty on the Nettle target ship in Portsmouth Harbour. The plate, which is of a composite character, consisting of steel and iron, weighs 8 tons, and is 9 in. in thickness. Bolts with worms 2¼ in. in diameter, the shank being turned down to 2¼ in. to avoid fractures in the thread were used to fix it to a transverse wood bulkhead, built from side to side of the ship, with two vertical and two horizontal layers of oak bulks, making in all 3 ft. 6 in. of thickness, the whole being shored by substantial wooden spalls, secured by massive thwartship. Three rounds were intended to be fired at the plate from a 12-ton 9 in. muzzle-loading rifled gun, standing behind a thwartship wooden bulkhead 10 yards from the plate, the charges being 50 lbs. of battery pebble powder, and the projectiles chilled Palliser shots 250 lbs. in weight, giving a muzzle velocity of 1420 ft. per second, and the energy at the muzzle 2486 ft. The experiments were under the direction of Captain Herbert, of Her Majesty's ship Excellent. Messrs. Cammell were represented by Mr. Wilson, whilst Mr. Purkis, dockyard foreman, was present on behalf of the yard authorities. The first projectile penetrated nearly the entire thickness of the plate, and produced a number of fissures, but was completely shattered by concussion. The second round obviated the necessity for firing the third. Notwithstanding that the shot was reduced to fragments, the point of the projectile, however, penetrated deeply into the plate, and the cracks were considerably enlarged. Several pieces of the metal were almost disconnected. The third plate manufactured by Messrs. Cammell for the purpose of this experiment has been taken on board the Nettle, and will be fired into without delay. The other plates will shortly be returned to Sheffield to be re-tempered, and, as at present determined, the experiments with these plates will take place simultaneously.

TRADE OF THE TYNE AND WEAR.

May 16.—The Steam Coal Trade continues steady, and the colliers in Northumberland, as a rule, are working well up to full time—there are some exceptions. The price of steam coal is also well maintained, the highest being 10s., and second-class 8s. 6d. to 9s. Second-class works are only moderately employed, and the prices of these coals are still very low. There is no change in the position at those works where strikes and partial strikes have occurred owing to disputes as to working rates. The Scumerston Colliery, where upwards of 100 men have been employed, is to be stopped. This colliery is situated near Berwcik, where the coal seams are generally thin. The same company have another pit in that district, where part of the men will be employed. The shipment of Durham coals at Tyne Dock continues to improve; about 75,000 tons were shipped during last week. Most of the collieries producing gas coal are fairly employed, and contracts have been entered into in some cases for considerable periods. The Coke Trade is, of course, very dull, owing to the stagnant state of the iron trade, and works are being closed. At Brandon, the centre of the coking district, the great firm of Strakers and Love are about to close another pit, several having been closed previously by Messrs. Love and Co. and others. A large number of coke ovens are now closed in Durham. The strike at the Eldon Colliery still continues, but a few men are employed. These men, as usual, are disturbed on leaving their work, and some of the offenders have been brought before the magistrates for the offence and have been fined.

An important question is now pending in reference to the firing of shots in the Harvey seam of the East Hetton Colliery, Durham. In January Mr. Thos. Bell, Her Majesty's Inspector of Mines, believing that the firing of shots in the long wall working of the Harvey seam at East Hetton was dangerous to life, gave notice to Mr. W. O. Wood, the manager of the colliery, under the 46th section of the Mines Regulation Act, to discontinue the practice. The views taken by Mr. Bell were opposed by Mr. Wood, and a long correspondence with the Home Office resulted in a case of arbitration under the conditions provided by the Act. The whole question has been fully discussed at two lengthy sittings, held at the County Hotel, Durham, before two arbitrators and an umpire. Mr. Brignall, sen., instructed by Mr. Bell, represented the Home Secretary, and Mr. Blackwell, barrister-at-law, instructed by Mr. C. E. Barnes, represented the managers and owners of the colliery. Much interest is attached by the mining community to the award, which is expected in the course of a few days.

A general meeting of the North of England Institution of Colliery Engineers was held on Saturday, at the Literary and Philosophical Society, Newcastle; the President (Mr. S. C. Hair) in the chair. The chief business was a discussion upon a paper on "Wire-rope and Fastenings," read at a previous meeting by the secretary, Mr. John Gibson Ryhope. The President-Secretary and Mr. Ross described the results of several tests made at Sunderland with various kinds of sockets attached to iron ropes, and the sockets in all cases failed at certain strains, whilst the iron ropes held good. Mr. Beck said his experience was that ropes occasionally broke, but he never saw a socket yield. Mr. Wright said the object was to obtain a fastening which would enable work at collieries to be done with the lightest possible rope. If they could do the work with a fastening that would carry 5 tons why should they use a wire-rope which would carry 15 tons, which was the usage of the day? It could not be denied that ropes were uniformily three times the strength of the fastening, and why should that be so when the fastening had to carry all the rope had to carry? He hoped this discussion would produce some good results. The Secretary said the object they had in view was to try to reduce the wire-ropes to the strength of the fastenings put on them. At Ryhope they were running ropes to bear about 100 tons, and they could not put a fastening on which would bear more than 50 tons. His object was to reduce the weight of the rope, and with the assistance of rope makers to try to arrive at a class of rope flat and round best suited for underground work and hauling. The discussion on the subject will be resumed at the next meeting.

There was a very fair attendance on 'Change at Middlesborough on Tuesday, but the market again showed a very quiet tone and an indisposition to do business, though prices are now more in favour of buyers. The makers are easier in their quotations than last week. No. 3 is quoted from 38s. 6d. to 39s., and No. 4 (forge) 37s. 6d. to 38s., less 1 per cent. commission. Iron can be bought generally at the lower figures. One sale of No. 3 took place at 38s. 3d. The sale of the Norton Ironworks has been stopped, arrangements having been made with the mortgagee. The deliveries for foreign ports this season are disappointing expectations. It was believed that a much larger trade would be done, but buyers are holding back. The chief outlet for iron is the coastwise trade, especially with Scotland. Makers are they generally admit put to a severe strain to make their own under present circumstances unless they have some special advantages in the shape of raw material in their favour. Messrs. Hopkins, Gilkes, and Co. are blowing out one furnace with a view of its undergoing repair. Taking everything into account the make of pig-iron is in excess of what it should be to promote a healthy state of trade. The finished iron branches do not show any specially changed features; the demand is quiet. Plates only show a moderate enquiry, though in some cases a fair extent of work is in hand. This is shown by the restarting of the Britannia Works at Middlesborough by the Skerne Iron Company, which will shortly take place. Ship-plates are 6*l*. 2s. 6d. to 6*l*. 5s.; most of the producers ask the latter figure, but work can be placed at the former where orders are low. Bars show no improvement in demand; they stand at 5*l*. 10s. Sheets are 7*l*. 15s. to 8*l*.; angle iron, 5*l*. 15s., less 2½ per cent.; puddled bars, 3*l*. 15s., net. The coal trade keeps dull as a whole. Coke shows no alteration.

The annual reports of the Inspectors of Mines were issued on Tuesday. Mr. Willis, for the Newcastle district, presents a comparative table for the years 1876 and 1877, which shows the following results:—In 1876 the total number of accidents was 84, and of deaths 89, of which 67 accidents and 70 deaths occurred in coal mines, and 17 accidents and 19 deaths in metalliferous mines. In 1877 the number of accidents in coal and metalliferous mines was respectively 64 and 19, and of deaths 66 and 21, giving a total of 83 accidents and 87 deaths. This was out of a total of 58,853 persons employed in 1876, and 58,156 in 1877. From these figures it appears that the proportions of lives lost and persons employed did not materially differ in the two years. There was little difference either in the proportion of mineral raised, the number of tons in 1876 being 16,810,333, and in 1877 16,059,388. Mr. Bell's report, which deals with the Durham district, shows that the accidents in 1877 were all single accidents. They caused the deaths of 95 persons in the coal mines, 21 in the ironstone mines, and four in the metalliferous mines. This, as compared with the previous year was an increase of 24 deaths, which, to use Mr. Bell's words, might be regarded "in the light of a most unsatisfactory result." The total amount of the minerals wrought in the district in 1877 was 26,147,253 tons, against 26,493,819 tons in the previous year, and the number of persons employed above and below ground in 1877 was 65,014, as against 68,213 in 1876.

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

May 16.—The Coal Trade in all its branches remains quiet, with a tendency to deepened inactivity at the house coal collieries. Regarding furnace and forge qualities, consumers can buy at pretty much what prices they like—of course, within reason. The Pig-Iron Trade is unimproved. From the North of England and other districts the competition is severe, and this keeps the market in favour of consumers. A few first-class firms, however, still demand standard rates. There is no increase of work at the mills and forges devoted either to high quality or inferior and common quality iron. Export orders are very scarce.

After my previous warning no surprise is expressed in this district at the failure of the proposed tin-plate combination. It was pretty well known to the initiated that certain leading houses would look after No. 1, whatever others might determine to do. Such firms think that the disease will work its own cure by the stopping of new firms who have been wishful to get trade at any price, and if this should be the case the makers who now hold aloof will, to say the least of it, not be sorry. But it must not be supposed that the new firms are alone to blame.

Colliery proprietors are just now interested that the late Chairman of the Mines Drainage Commission should have declared at the last meeting of the commissioners that they would allow no mine-owner to plead as an excuse for not paying his surface drainage rate that the commissioners owed him money for pumping in connection with underground drainage. There would not seem upon the face of it to be much need for such declaration, as it was stated at the meeting that no such difficulty as this determination intended to provide against had arisen; but it is significant that the secretary of the commissioners said that if the board would pass a formal resolution upon the subject it would "greatly strengthen his hands."

Transactions have been recorded in several properties upon the local Stock Exchanges since my last. The fully paid shares of the Sandwell Park Colliery Company have sold at 3⅞ premium, and the new shares of the same company at 3 premium. The property of the Spon Lane Colliery Company, on the contrary, has been bought for 5½ dis. Sellers in the Cannock and Huntington Colliery offer their shares at 9 dis., those in the Cannock Lodge Colliery at 1½ dis., in the Walsall Wood Colliery at 5½ dis., in the Pelsall Coal and Iron Company at 11 dis., and in the John Bagnall and Son's Iron-making Company at 7¾ dis. But for none of these properties are there buyers in the market at the present price. Buyers of Darlaston Coal and Iron Company's stock quote 8½ dis., but sellers hold off at 8 dis.; 2*l*. 5s. is offered for the 10*l*. shares of the Chillington Iron Company, but holders demand 3*l*.

The Walsall Poor Law Guardians are seeking the advice of the Local Government Board as to whether they may afford stone-breaking relief to miners who had come to the district intending to work at the East Cannock Colliery, but who finding that the men there were striking because the employers refuse to pay them more than 2s. 3d. per "day" when the surrounding masters are paying 2s. 9d., decline to work, and are now destitute.

Trade in North Staffordshire is very dull. Coal and slack are at a discount. Pig-iron is in small demand, still it would seem that production is likely to be shortly augmented. Finished iron is increasingly depressed.

REPORT FROM MONMOUTHSHIRE AND SOUTH WALES.

May 16.—There is better news this week with regard to the Plymouth and Aberdare Works. A number of Scotch capitalists have, it appears, purchased a large portion of the shares in this company, and thus have become the possessors of one of the most valuable colliery properties in South Wales. There is no hope of the ironworks being re started.

The cases against the men, mostly those on strike, charged with intimidating workmen employed at the Blaenclydach Colliery, the property of the Treforest Steel and Iron Company, have come before the Stipendiary at Pontypridd. Over a score were summoned. One of the defendants was fined 5*l*. and costs, and the cases against the rest were allowed to stand over for a month, it being understood that if in the meanwhile the men behaved well the cases would be withdrawn.

The case of the Nant-y-Glo and Blaina Company *v.* Grave has been before the Chancery Division. It will probably be remembered that the defendant, who resides at Manchester, was rendered liable for certain shares which had been presented to him by certain gentlemen who had acted as promoters of the company. The defendant was then ordered to pay altogether about 5600*l*. Leave was now asked that further proceedings should be stayed, which was granted on defendant's counsel undertaking to pay the money and taxed costs into Court, as Mr. Grave intends to appeal against the recent decision.

The news arrived to-day by telegraph that the preamble of the Pontypridd, Caerphilly, and Newport Railway Bill has been declared proved by the Committee of the House of Commons. The scheme has for its object the connecting of Newport by direct railway communication with the rich mineral district of the Rhonda Valley. It will also afford an alternative route to Cardiff. The importance of the scheme to the town and port of Newport cannot be overrated.

The whole iron clearances from Cardiff last month show a considerable increase upon those of the corresponding month of 1877. Those of Newport exhibit a falling off. The figures are—Cardiff, 9979 tons, compared with 4460 tons; Newport, 8462 tons, against 13,837 tons; and Swansea, 794, against 230 tons. During last month Cardiff also exported foreign 325,858 tons of coal, against 307,530 tons in the corresponding month of last year; Newport, 50,081 tons, against 54,922 tons; and Swansea, 51,355, against 60,802 tons. Coastwise clearances during the same period were—Cardiff, 61,381 tons, compared with 61,773 tons; Newport, 60,670 tons, compared with 64,086 tons; and Swansea, 19,214 tons, compared with 22,851 tons. Last month Cardiff likewise shipped 1979 tons of patent fuel, as against 6978 tons in April, 1877; and Swansea, 7058, against 9067 tons.

During the past few days the Iron Trade has shown no fresh signs of activity, and things look as gloomy as they well can. There has been no better demand experienced for railway iron, and the works have been mainly going on the hand to mouth principle; orders are scarce, and mostly for immediate requirements, and speculation seems to be becoming a thing of the past. For bars there is but a limited demand, and prices, so far from improving, have shown a slight falling off. For pig-iron, too, quotations are a shade more in favour of buyers. Clearances have been few during this week. The steel industry has not been over brisk, but prospects in this department look fairly encouraging. A section of the men at Ebbw Vale have had a dispute with their employers as to wages, but now they have resumed work at the reduction asked for. Never was the tin-plate trade in a worse plight than at the present time. A meeting is to be held at Swansea to-day to finally decide on the restriction of make. The establishments in the western portion of the district have been kept on full time, but this remark by no means applies to Monmouthshire. There several works have long been closed without any apparent chance of their being re-started, and now it is reported that there is a probability of the Abercarne Works being stopped; the fact is, the make is so unprofitable, and with tin-plates selling at about 14s. a box, it is no wonder that makers are unable to stand against the tide of depression. During the week Messrs. Nurse and Phillips, of Rhiwderin Works, have been compelled to file a petition, with liabilities estimated at about 60,000*l*. Had the trade been in only an average state of prosperity there is every reason to believe this unfortunate stoppage would not have occurred.

A fair amount of activity is still observable in the coal trade, and this remark applies with much force to the steam coal department. There are some good orders in hand for steam coal, and the quantities cleared to the Mediterranean depôts are large; of course the main complaint is still as to prices, which are materially unaltered, though firmer. Anthracite qualities are in moderately good request, but house coals are dull. The patent fuel department also lacks animation.

THE TIN-PLATE TRADE.—An influential meeting of tin-plate manufacturers was held at Swansea on Thursday—Mr. James Spence, of London, presiding—to receive the report of the committee appointed last month in reference to the general reduction of make. After considerable discussion it was decided that the reduction of 20 per cent. in the make should be continued to the end of the year: 180 mills were pledged to this course, either by the proprietors in person or by letter, but it is expected that 198 mills will adhere to it.

REPORT FROM NORTH WALES, SALOP, AND CARDIGAN.

May 16.—The coal merchants complain that through slackness of trade at the collieries the owners of the latter are pushing off coal on account of existing contracts until the merchants scarcely know what to do with it. Both collieries and ironworks have a very desolate look. A walk through some of the latter is like a walk through a city of the dead. The surrounding population is suffering from a great deal of poverty. The Penrhyn slate quarries have been very free from accident, but last week a man was unfortunately killed by a fall of roof. It is a significant fact in the slate trade that the larger and better quarries of Carnarvon and Merioneth have not reduced the wages of the men. There is no doubt that the shipments to the Baltic and northern ports generally will clear off stocks that have accumulated during the winter—that is, if peaceful counsels prevail. There are some things, of course, more valuable than peace, but, if I may be permitted the remark, it is difficult for a dispassionate man to discover such things at the present time, and the conviction forces itself upon one that there is a good deal of that blind unreasoning hate which when we were lads we lavished upon Frenchmen, whom we used to cut down in every bunch of nettles. Looking at the commercial side of the question, we need peace. I observe that efforts, which it is hoped will be successful, are being made to restart the Prince of Wales Slate Quarry. This quarry has every facility for doing a good trade. There is another large quarry a few miles off—the Gorsedda—which has great capabilities, and which I should like to see reworked. The old slate quarry Rhiwarth, at Llangynog, was offered for sale at the Queen's Hotel, Manchester, on April 29, without eliciting a single bid. The Manchester capitalists at the present time have as much as they can do to hold their own, but it is a pity to see a valuable paying property going begging. The sett quarries, near Portmadoc, are for the most part working well. The Minfford is sending large quantities of setts to Manchester. The Queen, which has excellent material and facilities, after having been prepared for work, is unfortunately lying idle. The proposed reduction of the wages of the sett makers in this neighbourhood did not take place, but the whole of the men were put on piecework.

We are watching for results at the lead and copper mines that have been started within the last year. Great Holway, Cambrian, Blaen Caelan, Bettws-y Coed, Caron, South D'Eresby, as well as some others started or restarted earlier, and the public generally would hail with satisfaction the signs of the fulfilment of their early promises. It is getting time, for example, for us to hear some good results from Aberdaunant, Bodidris, Saint Patrick, Clementina, Llanrwst, and D'Eresby. From the two latter we await the practical result of their rich lodes—extensive sales and profits. It is pleasant to see some of the old mines, as Roman Gravels and Cwmystwith, working steadily. At the former mine the boring machine, the trials with which I recorded in a former report, is effecting a saving of 4*l*. per fathom. I notice that Prof. Rudler, in his lecture on "The Minerals of Wales," called up the shades of those departed mining worthies—Hugh Middleton and Mr. Bushell. One hears of the good fortune of these two worthies so often that one is tempted to wish sometimes they had left a little more of their good luck behind them. It would be an acquisition to both science and mining if the Professors of the University College, Aberystwith, would set themselves to the task of working out the subdivisions of the strata in Cardiganshire, and so trace the metalliferous zones both in depth and horizontally. I suppose it is too much to expect this from our mining authorities in that county in the present stage of mining education. Besides the fact that the lodes are in killas or clay-slate, and that some of them enabled Hugh Middleton to take the New River to London, and Mr. Bushell to supply King Charles with the needful, we know next to nothing about them. If Cardiganshire were in Germany, or even in Russia, how different would all this be. It is pleasant to notice and record an improvement at Parys Mountain, and to hope with an advance in the price of copper to see the historic mine working vigorously.

REPORT FROM THE FOREST OF DEAN.

May 16.—The local Coal Trade remains much as it was at the date of our last report; if any difference, it is hardly as good now as it was then. Perhaps it would be more correct to say that at two or three pits it remains in *statu quo*; but, with regard to the remainder, trade is scarcely so good with them as it was, and the apprehension, is that we can hardly calculate upon much improvement, seeing that little more cold weather can be expected, inasmuch as we are in the middle of May. True, the weather is very variable at present—sometimes warm and genial, and at other times cold and squally. Last Friday we were visited with fierce and vivid lightning, accompanied with heavy thunder and a tremendous downpour of rain. But as we approach Midsummer we may expect a less demand for house coal, and other kinds are also limited as to demand. There appears to be a slight improvement in the Iron Trade, and we are glad to be able to report a satisfactory state of work at the Forest Vale Works.

Poverty and distress are alarmingly prevalent in the Forest still, especially in West Dean. Much, however, has been done to help the distressed, but it does not appear that anything will fully meet the case of the district, except the migration or emigration of a large number of the inhabitants. In East Dean an attempt is making at alleviating the distress by road making, but so far the results are most unsatisfactory. Great complaint was raised at the low wages offered—1s. 6d. per day—but the plain and painful truth of the matter is that the men employed do not earn half of that low wage. Many of them are strangers in the place (Cinderford), and numbers of them are not physically capable of doing a fair day's work, but are fit objects of out-door relief from the Poor-law Union. And it is clear that unless a different system be adopted much of the money will be uselessly wasted, and when the funds are exhausted it will be seen that the most important portion of the proposed road will be left undone. The overman of the works exerts no authority over the employees so as to secure their attention to work, but merely directs the line of operations; in other words, prevents the road being cut in wrong directions. The only cure for the evil will be to adopt the piece-work system, which, properly applied, will secure justice to both sides. Let the work to be done be decided upon and appraised by competent surveyors, fix a liberal price per yard, and then let the "distressed labourers" be engaged to do it. Of course, with a competent manager to direct it, and see that it is properly done; otherwise a considerable proportion of the funds will be wasted. However, as there is a committee, let that committee see to it that it acts the part of a faithful steward towards the subscribers and the public.

PIG-IRON.—Statement of the exports of pig-iron, in tons, to the following countries during the first four months of the years named—

	1872.	1873.	1874.	1876.	1878.
United States..	180,193	81,595	42,348	94	134
Russia	3,877	17,044	23,736	2,854	4,630
Egypt	8,578	1,520	9,995	136	2,251
France	61	1,725	706	24	50

GUNPOWDER.—In the last four months the value of gunpowder exported was 137,494*l*.; last year in the like period it was 107,085*l*.

Original Correspondence.

HULTAFALL MINING COMPANY.

SIR,—In my recent visit to these mines I went underground twice. In the 15th found that a cross-cut had been put out through the lode proving the lode to be upwards of 30 ft. in width, almost solid lead and blende. The western end was being driven in a part of the lode wholly of the same character. The eastern end is also in solid lead and blende. In the shaft sunk 10 fms. deeper a cross-cut will be put out to intersect the lode, which may be expected to be cut into in the course of another week or fortnight. To raise large quantities of stuff out of this mine is an easy matter by the use of a rock-drill. In these two levels, driving four ends, it is estimated that the lode will produce about 20 tons of mineral per fathom: 8 fms. per month with the rock-drill can be easily driven, or a gross produce from ends alone of 600 tons, and when stoping is commenced double or triple this quantity would be a small matter. Captain Arthur Waters, in his report dated August last, says—

"What you want to make this property one of the greatest mining fields of the day is to get Maxfield's shaft down to a 50 fm. level, with levels going out at proper intermediate distances from that point to surface; and with communications made west to a shaft (say) 50 fms. from Perkins' trials and east to Christiana's, you could easily get 200 tons of the mixed ore per diem. In due course a line equal to the celebrated Vieille-Montagne may be expected at Hultafall. It is said that the yield of ore from these said great mines last year was 5900 tons lead and 54,000 tons blende."

Now, what has been done towards the accomplishment of this object is that already the shaft has been sunk to the 25 fm. level, or about half the depth of the Vieille-Montagne Company's mines, where they have been working for more than 20 years. It must be borne in mind that 2 tons of ore will yield about 1 ton of dressed mineral. The treatment of 40 tons per day ought to give 500 tons per month of dressed mineral blende and lead. I can see no difficulty in this quantity being supplied to the crushers by the end of August next, when the dressing-floors should be in the same advanced state; and I can see no reason why there should not be laid a locomotive tramway from the mines to the dressing-floors, a distance of only three miles. This being accomplished, the company would be rendered quite independent of the farmers in the neighbourhood for carting—which is now 3s. per ton—and, at the same time, great saving would be effected, while the railway scheme would profit largely.

Capt. Southey at his visit to the mines valued the lode as worth 20 tons per fathom, and I base my calculations on his statement, confirmed by Capt. Waters, and Mr. T. C. Gregory. The exact words used by Capt. Southey are—"The lode will produce 20 tons per fm., which is under rather than above the mark." Certainly since that time there has been no falling off in the value of the lode, which has rather improved than otherwise as depth is attained, and it must be remembered that for these mines to make large profits when the dressing department is completed an out-put of 40 tons, not 200 tons, per diem would give a most gratifying result. Hitherto the mine has been sunk with a horse-whim. The steam-engine and boilers, and all necessary machinery appliances, are on the mines, and are in course of erection. They will be finished in about two months from the present time. This will effect a saving in working as well as expedition in working. At the dressing-floors a substantial building has been erected covering in the whole—crusher, jiggers, buddles, &c., as erected by Mr. Green, of Aberystwith, who last month visited the mines, whence he wrote—

"The dressing-machinery is working to my entire satisfaction, and I think you will find it equal to your best expectations. The erections are done in a superior and most substantial way, and in less time than I have ever known a similar establishment finished. The machinery will pass the quantity of stuff which was named—60 tons per 24 hours easily, with the engine working at less than half its power."

The 300 tons of ore which were carted over and treated have proved the opinions correct of the gentlemen who have inspected the mines, and all that is required to finish the dressing department is the erection of a fine crusher, with two more jiggers, and two additional buddles, which will be completed in about one month from the present time. The further requirement to make this one of the greatest properties of its kind is undoubtedly to lay down a light tramway from the mines to the dressing-floors—a distance of three miles. This can be done, inclusive of a light locomotive, for 1000*l.* a mile. What I have suggested would be to form a company to be called the Hultafall Railway Company in the same number of shares as the Hultafall Mining Company—say, 12,000—calling up 5*s.* per share. Carrying 60 tons per day, at 1*s.* 6*d.* per ton (a saving of 50 per cent. to the mines), besides doing the work quickly, would realise to the railway company 1350*l.* per annum gross yield. Judging by the cost of working the Van Railway a net profit should result to the shareholders of nearly 25 per cent. on their investment. If this scheme should be carried out of course the shares would be offered *pro rata* to the existing shareholders in the Hultafall Company.

Should the matter be set about forthwith the whole could be accomplished by the end of August. The fact should not be forgotten that Capt. Arthur Waters' report bears date Aug. 21 last, and that we are now only in the middle of May, and that the whole of this work has been done in about nine months, those nine months being, moreover, the Swedish winter. Recollecting all this I think some credit is due to the directors for the expeditious way in which the work has been accomplished. My opinion is unchanged as to the value of this property, and it would afford me great pleasure for the gentlemen who inspected the same nine months ago to visit and report again. I think it would be especially gratifying to Captain Southey to see the amount of work which has been done.

Austinfriars, London, May 17. GEORGE BATTERS.

FLAGSTAFF COMPANY.

SIR,—You will, I am sure, grant me a little space wherein to reply to Mr. Kerly's answer to my letter in the Journal of April 4. Mr. Kerly subscribes himself "Solicitor to the Company," and I have no doubt he has followed the instructions of his directors and clients—which instructions I suspect to have been the famous—"There is no defence; abuse the plaintiff's attorney." So he reflects severely on my taste and breeding, and insinuates that I am a "wrecker," and must be influenced by sinister motives. I do not think there is anything in my letter to warrant such a charge, but I admit I was amused, and that I gave vent to my amusement about the board having been "strengthened by the Lionite and the mapseller," but the expression was the committee's, not mine. I simply condensed it to give it effect. Is it not true? Mr. Kerly thinks I sneer, whereas I am only directing attention to the pretentious nature of the announcement, and I desired to suggest the idea that their callings did not qualify them for the duties they had undertaken, whilst their position and standing were not calculated to inspire confidence.

Their plans Mr. Kerly commends as best under the circumstances; but Mr. Kerly was one of those professional men to whom I referred as approving very decidedly Mr. Pearson's scheme and recommendations, and I attached great weight to his opinion. It is only fair to say he has had but little time to inform himself of the situation of the company's affairs. He has not had time to examine the books and past history of the company. I am bound to say and to think this, as otherwise he would not have asserted that my statement about the debentures was a "deliberate falsehood." A little further investigation, and Mr. Kerly will find I was justified in my description of their "fluctuating value," and he will no doubt tender his apology. He would have rendered the shareholders, and especially those to whom the debentures are now offered, greater service if he had shown how they could be taken as "security," collateral or otherwise. Debentures issued now must rank after existing judgment debts, and I think that that fact coupled with the circumstance that the title to the mine is awaiting the decision of the Supreme Court, ought to have been brought to the notice of the shareholders in the same circular which invited their subscriptions and offered the debentures as security. However, little mischief has been done; very few shareholders have subscribed, and such as have consulted me have given their money conditionally on an adequate sum being collected; and it is not my fault if they do not know the risk they run. I still prefer Mr. Pearson's scheme, in which the element of risk was eliminated. A LAWYER.

FLAGSTAFF COMPANY.

SIR,—I see in last week's Journal a letter, signed "Alex. Kerly, Solicitor to the Company," which might well have been headed "clamor et praeteren nihil." It contains, however, one statement which ought not to go to the public uncontradicted. I mean the statement that "Lawyer" when he wrote "that the company sold debentures for the value of spoilt stamps" was guilty of a perversion of the truth, and a wicked and deliberate attempt to mislead. I will take the liberty of asking Mr. Kerly to show in what manner the debentures disposed of at Somerset House were useless, and in what way "Lawyer" has been guilty of an untruth. I may add that I am not (as has been suggested to me) the writer of the letter signed "Lawyer." WILLIAM JOHN MANBEY,

Chancery-lane, May 17. Late a Director of the Flagstaff Company.

COST-BOOK MINING—LIMITED LIABILITY ACTS, 1862 AND 1867.

SIR,—Various of the mines in Cornwall and Devon are conducted upon the Cost-book System, which possesses many peculiar, salutary, and apt advantages over the Limited Liability Acts, as now in vogue in the conduct and working of mines, and especially so in respect to shareholders, who subscribe the capital; they, in fairness and simple justice, ought to receive the chief gains in the shape of dividends, two-monthly or quarterly, as in the olden times, instead of, as under the *modus operandi* of the Limited Liability Acts, ceding to the promoters some 50 to 75 and 80 per cent. of all accruing profits in capitalised paid-up shares at starting, and, in many cases, before the lodes are proved to contain minerals in paying—say nought of profitable—quantities. This is an absurdity in respect to mining adventure, as no mine is worth a premium before the ores are discovered and ascertained to exist in bulk, so as to yield gains in excess of cost of production. A good mine is worth a premium, and often of thousands per cent. on capital, but never until the hidden wealth is brought to light. We remember Tresavean Mine shares, with 20*l.* paid, selling at 2700*l.* each; but during that year, 1833, the dividends were 630*l.* a share, or just 3150 per cent. per annum. The yield in 25 years, 1814 to 1848, was 307,970 tons of copper ores, realising 1,879 735*l.* 7*s.* 6*d.* in money. This company netted profits, and divided among the proprietary 452,790*l.*, upon a gross expenditure of 3120*l.* Yet this valuable property commanded no premium until the ores were developed; but, on the contrary, sold at a heavy discount, as the previous generation to the present regarded all the money expended on a mine as absolutely lost until discoveries were made; hence the value of the Cost-book System, as under it meetings should be held every two or three months, the accounts made up, and the book "squared" by making a call or paying a dividend, and a fresh start made under the immediate sanction and control of the shareholders personally. Thus the proprietory were protected from abuses, as neither directors, committees, or executives controlled their action or the independent course of events. At East Crofty shares were relinquished as worthless, and the assembled shareholders reluctantly determined to continue operations for another two months; yet ere they parted a discovery was announced of the cutting of Reeve's lode in the 43 cross-cut north, and in a year the shares relinquished as valueless sold at 1000*l.* each, and in a few years it paid in dividends the whole outlay, with 500 to 600 per cent. gains. Such are the ordinary course of events in mining. No one can look through the undeveloped ground, define exactly the expenditure required, or the time necessary. The old and familiar motto is *Nil desperandum*, and Hope is his harbinger to success. The Cost-book System was the safety-valve of this mine; the shareholders were ashamed as a body to show the white feather. No eloquence would have persuaded them to make a heavy call; but they would risk a little more rather than beat a retreat without reaching and seeing the lode. They could not see through the ground; yet while drinking success to the mine—for without punch they could never make calls in those days—success had been accomplished, and their despair supplanted by the wildest visions of hope, for a barrowful of ore was lifted bodily on the table, and all doubts as to the future dispelled for ever. West Basset was abandoned, sold for 600*l.*, yet a cross-cut discovered a lode that created a market value of 300,000*l.*, and actually yielded upwards of 200,000*l.* dividends. North Basset was sustained over years by small calls, subsequently paid 45,000*l.* dividends in one year, and sold for 350,000*l.* Buller was also abandoned, yet again worked, and upon 1280*l.* outlay yielded 350,000*l.* profits, and sold at 1000*l.* per 5*l.* share—say 200*l.* for every 1*l.* expended in capital. South Frances, Basset, Seton, South Caradon, and a host of other great, profitable, well-remembered mines bear evidence in favour of the Cost-book System, and under the present principle of concocting and conducting the Limited Liability Acts as applied to mines they would never probably have been successfully developed. We never heard in former times of mines being loaded with capitalised paid-up shares. Everyone bore his share of the responsibility, and paid up his "whack" in full. The Cost-book is at once the security of shareholders and the protection of legitimate mining. The Limited Liability Act as applied is the friend alone of promoters and concoctors of public companies. They are financial coteries, and not mine adventurers. The Cost-book System was the salvation of Dolcoath Mine, which after half-a-century's prosperity became unprofitable, and shares fell to 10*l.* each. For fourteen years the workings were fed by small and not unfrequent calls, and the result was a mine that paid, in 1872, 48,000*l.* in dividends, and sold for 90*l.* to 95*l.* per 1-24th divided share—or, say, 2200*l.* for the once depreciated share.

It is true that the Cost-book System is unlimited liability, so is the London and Westminster and many other joint-stock banks, while every private co-partnership is unlimited; but mining under the Cost-book System is controlled by the partners, as are all private co-partnerships. But in Limited Liability Acts mining companies the subscribers are usually mulcted 50 to 75, and in cases up to 87½ per cent. of all their money through capitalised paid-up shares by promoters and directors at starting—thus with more than ordinary commercial prosperity they receive only a very small modicum of the gains, while upon the Cost-book Principle they fairly and honestly share the whole. A shareholder is not necessarily in a Cost-book mine obliged to remain responsible, as in the case of banks, for three years after transfer of shares, or compelled to get a responsible substitute, as in the case of railways or joint-stock companies, to the satisfaction of his co-partners or the directors and executives, or otherwise remain liable for debts not only existing but also for those hereafter contracted. Under the Cost-book System a shareholder can end his partnership and responsibilities at any moment by a simple notice of relinquishment addressed and delivered to the secretary or purser, paying his portion of debts then contracted, claiming as a set-off his proportion of the machinery, plant, materials, ores wrought, all properties and moneys belonging to the company at the date of surrender—this share of the assets must be paid over within a period of twelve months, and no liability can be encountered or enforced from the date of retirement. This is an advantage of paramount importance to speculative and enterprising capitalists in times of pressure and panic, such as preceded and followed the crisis that culminated in 1866. The dreadful calamities and losses entailed in the winding-up courts would unquestionably have been greatly mitigated had those who stood committed to Limited Liability Companies possessed the power to retire, as exists under the Cost-book System, when markets become paralised and there be no sale whatever for shares.

The great drawback to Limited Liability Companies is heavy loading at starting in paid-up shares. In case of success shareholders get small profits—promoters pocket the most; as instance, Roman Gravels, Tankerville, and Leadhills. The first and second had working capitals of 8000*l.* each, and the third 15,000*l.*; the loading has been 82,000*l.*, 64,000*l.*, and 105,000*l.* Neither of these mines, although unquestionably sound prizes, has paid back the capital, and it is very doubtful if they ever will. These companies as constituted must be regarded as successful financial operations, and not mining enterprises, when capital, promotion, working, and dividends are unravelled and fairly compared. We may ask the question, for it is pertinent to the case, what would the public say if the premiums at which the London and Westminster, London Joint-Stock, London and County, National Provincial of England Banks, or the increased value of the Rock and Norwich Insurance Companies were capitalised, and the dividends distributed over the whole? We should no longer hear of 14 up to 24 per cent. dividends on joint-stock banks, or 80 per cent. on insurance shares; but, on the contrary, very ordinary reference made to them as investments.

In joint-stock banks, insurance companies, railways, and other sound investments the money actually subscribed and used in the businesses participate in the dividends. So ought it to be in mining. If Roman Gravels was worth 72,000*l.* purchase-money the capital should have been registered at 8000*l.*, and the shares sold issued at 7*l.* 10*s.*, with 15*s.* paid, and then it would have shown the shares at a premium of 6*l.* 15*s.*, and the mine would have shown its legitimate gains. Tankerville, with 15*s.* paid up for mining purposes, was issued at 5*l.* 5*s.* premium. The company has actually paid in dividends 58,200*l.*, or just over 50,000*l.* profits upon the working capital—still the subscribers at par are yet 14,800*l.* out of pocket, with no interest for their money. Leadhills started well for the first year, and paid 12,000*l.* in dividends; but even profits of 1000*l.* a month must be maintained over a period of 20 years to pay back 120,000*l.* purchase-money, with 5 per cent. interest. We do not object to the Limited Liability Act when properly applied to mining, though we are more favourable to mining under the Cost-book. What we contend is that no premium should be capitalised, and that the gains of promoters shall rest on the merits of the adventures, and the premium distinctly shown, which the shares legitimately or otherwise command. These should arise from discoveries actually made as in the days when—

Carn Brea	£15	paid	Sold at	£ 350	a share.
East Pool	5	„	„	500	„
Seton	98	„	„	1000	„
Tresavean	20	„	„	2500	„
South Caradon ...	1¼	„	„	460	„
South Frances ...	18 18s. 9d.	„	„	800	„
Levant	1 5s.	„	„	1000	„
Par Consols	—	„	„	1000	„
Trethellan	—	„	„	500	„
East Rose	50	„	„	1750	„
East Crofty	85	„	„	1000	„
North Roskear ...	14	„	„	800	„

and 300 others which have proved equally important prizes worked under the Cost book System, and full particulars of which can be obtained upon application to the undersigned.

R. TREDINNICK,
Consulting Mining Engineer.

Exchange, Coleman-street, London, May 15.

[For remainder of Original Correspondence see this day's Supplement.]

OUR COAL ABROAD.

The exports of coal from the United Kingdom for the first four months of this year amounted to 4,484,343 tons, as compared with 4,309,509 tons in the corresponding period of 1877, and 4,470,223 tons in the corresponding period of 1876. In addition to these exports, 1,199,305 tons of coal were shipped from the British Isles in the first four months of this year for the use of steamers engaged in foreign trade, as compared with 1,119,712 tons in the corresponding period of 1877, and 1,064,284 tons in the corresponding period of 1876. It follows that altogether 5,683,648 tons of coal were shipped from Great Britain to April 30 this year, or at the rate of 17,050,944 tons per annum. The aggregate shipments of 1868 were 10,967,062 tons, so that the exports would appear to have made a substantial advance during the last decade; this advance promises, indeed, to come out this year at about 70 per cent. As, however, we have more than once observed in dealing with this subject, it is not at all clear that this continual growth in the external demand for our coal is an unmixed advantage to this country. At the same time, we must take the world as we find it, and there can be little doubt that the return to low prices which has occurred in the British coal trade has sensibly stimulated the demand for Scotch and English coal in various parts of the world. That this return to lower prices has been sensible and substantial may be inferred from the single fact that while the value of the 4,309,509 tons of coal exported in the first four months of 1877 was 2 236,496*l.*, the corresponding value of 4,484,343 tons exported in the first four months of 1878 did not exceed 2 174,793*l.* It would be idle to suppose that the lower rates now prevailing for coal have not materially assisted our coalowners to regain ground which they had, perhaps, lost in some of the markets of the world.

France continues, as hitherto, our largest external customer for coal. No nation more keenly seeks out the cheapest market than France, and now that English coal can be poured into France upon cheap terms and conditions it is going there in very substantial quantities. We sent the French 1,041,102 tons of our coal in the first three months of this year, the corresponding deliveries in the corresponding period of 1877 having been 931,580 tons, and in the corresponding period of 1876, 1,109,861 tons. We thus arrive at the remarkable fact that our exports of coal to France have been proceeding during the last three years at the rate of no less than 3,000,000 tons per annum. Neither the progress noted in the indigenous coal production of France, nor the great political vicissitudes through which that country passed even during the last ten years, have thus checked or arrested the demand for our coal among the French. English coal has to compete in France with both Belgian and German combustible; but thanks to the cheapness with which it can be delivered, our coal appears to more than hold its own upon the French markets. It may be remarked, however, that in April this year our exports of coal to France presented a certain decline, having amounted in that month to 233,866 tons, as compared with 255,093 tons in April, 1877, and 245,611 tons in April, 1876. It may be well to call attention to one rather noticeable fact in connection with our coal exports—that in April we sent 118,405 tons to Russia, as compared with 67,483 tons in April, 1877, and 66,633 tons in April, 1876. We fear that there can be little doubt that the very strained political relations which have prevailed of late between Great Britain and Russia have had something to do with the marked increase observable this spring in the Russian demand for English coal. Germany has taken less English coal this year; nevertheless, we sent the Germans 394,844 tons of our coal to April 30 this year, as compared with 452,846 tons in the corresponding period of 1877, and 505,787 tons in the corresponding period of 1876. The decline in the German demand was still continuing in April. Not altogether unimportant quantities of coal have found their way this year to British India, the aggregate exports to April 30 having been 223,212 tons, as compared with 221,249 tons in the corresponding period of 1877.

*** Now ready, THE MINING JOURNAL, VOLUME XLVII., FOR 1877. Neatly bound and lettered, price £1 12*s.* 6*d.* To be had from our office, 26, Fleet-street, London, or through any newsagent or bookseller.

ROCK-BORING MACHINERY REQUIRED.

THE DIRECTORS of DEVON GREAT CONSOLS COMPANY (LIMITED) SOLICIT FULL PARTICULARS from the MANUFACTURERS of ROCK-BORING MACHINERY, &c., for SINKING, DRIVING, or STOPING at the company's mines.

The particulars to be sent to ALEXANDER ALLEN, Esq., Secretary, The Devon Great Consols Company (Limited), 134, Gresham House, Old Broad-street, London, E.C.

THE ADVERTISER, who studied at the Royal School of Mines, London, the University of Freiberg, and has large experience in mining in Cornwall, Germany, Italy, and the United States of America, is OPEN for ENGAGEMENT either at HOME or ABROAD.

Address, "E.," care of the Secretary of the Society of Arts, Adelphi, London, W.C.

STOCK EXCHANGE AND PARIS BOURSE.—A firm with extensive connections in London and Paris, are willing to DIVIDE COMMISSIONS with gentlemen introducing orders for the Stock Exchange or Bourse. Apply, in first instance, "Brokers," care of Rudolf Mosse's Advertising Agency, 1, Old Change, Cheapside, London.

MR. WILLIAM SALMON, F.G.S., 22, QUEEN STREET, ULVERSTON,
MINING AND COMMISSION AGENT AND ACCOUNTANT.
SEVERAL VALUABLE IRON ORE, SLATE, and LEAD ROYALTIES TO DISPOSE OF.

MR. M. F. DORMER, STOCK AND SHARE DEALER, 70, CORNHILL, LONDON, E.C.
Strongly recommends the immediate purchase of Hultafall shares. Blue Tent, Birdseye, Colorado Terrible, and Flagstaff are worth attention.

COAL MINES REGULATION ACT, 1872.

EXAMINATION FOR MANAGERS' CERTIFICATES OF COMPETENCY.

DISTRICT UNDER THE CHARGE OF THOMAS WYNNE, ESQ., H.M. INSPECTOR OF MINES.

NOTICE IS HEREBY GIVEN, that an EXAMINATION for MANAGERS' CERTIFICATES OF COMPETENCY, under the above-named Act, will be HELD on the 24th day of June next, and CANDIDATES INTENDING TO PRESENT THEMSELVES at such Examination must, on or before the 19th day of June next, notify such intention to the Secretary of the Board of the above-mentioned District, from whom all information as to particulars can be obtained.

By order of the Board,
JOSEPH KNIGHT, Secretary,
Newcastle-under-Lyme.

N.B.—Persons who do not reside within the District are equally eligible for examination with those who do.

THE CHINA CLAY TRADE.

THE ADVERTISER, who is engaged in the Management of China Clay Works, has exceptional opportunities for the EMPLOYMENT of CAPITAL in this IMPORTANT and PROFITABLE INDUSTRY. Owing to the temporary depression in trade, there are now opportunities for investment which may not occur again for years, and handsome profits are certain.

Address, "C. E.," MINING JOURNAL Office, 26, Fleet-street, London.

THE ADVERTISER has just secured a VERY VALUABLE SILVER-LEAD SETT, in which there are several rich lodes and thousands of tons of halvans that will pay 100 per cent. over working cost. Wants a gentleman to form a company or advance money to open and lay out the works. The amount will be small.

Particulars from "Miner," MINING JOURNAL Office, 26, Fleet-street, London.

THE OWNERS of EXTENSIVE COLLIERIES in the MIDLAND COUNTIES are desirous of SECURING the SERVICES of an EXPERIENCED PRACTICAL COLLIERY MANAGER, to UNDERTAKE and DEVOTE the WHOLE OF HIS TIME to the ENTIRE MANAGEMENT, under a Consulting Engineer, of the whole of their works.

Application to be made to T. W. JEFFCOCK, Esq., Bank-street, Sheffield.

WANTED, OFFERS for the following fully paid SHARES, belonging to a Bankrupt's Estate, which must be SOLD:—

235 MALABAR GOLD WASHING COMPANY (LIMITED)... £1 each.
150 MALPASO GOLD WASHING COMPANY (LIMITED) ... 1 ,,
350 RICA GOLD WASHING COMPANY (LIMITED) ..... 1 ,,

Apply to JOHN B. BALL and Co., 1, Gresham Buildings, E.C.

WANTED, a RE-ENGAGEMENT as AGENT or MANAGER, ANALYST, ASSAYER, and SURVEYOR. Has had the management of Mines at home and abroad.

Address, Capt. BURN, Hodbarrow Mines, Millom, Cumberland.

OVERSHOT WATER-WHEEL FOR SALE.—30 feet diameter, 3 feet breast, never used.

Apply to JAMES DAVIES. Bwlchowa, Festiniog.

A BARGAIN FOR INVESTORS.

SOME SHARES in an ENGLISH COMPANY, conducting a perfectly safe business, and paying over 20 per cent. per annum, TO BE DISPOSED OF PRIVATELY, at a very low premium.

Apply by letter to "Shareholder 21," Messrs. Deacons, 154, Leadenhall-street, London, E.C.

TO INVESTORS.

SLATE QUARRY IN NORTH WALES, most advantageously situated, adjoining railway and river. Long lease; moderate royalty; no dead rent. Powerful engine and machinery for slab making; all approved quality. A FEW SHARES STILL UNALLOTTED.

For particulars apply "Secretary," 11 and 12, Bury street, St. Mary Axe, London, E.C., where every information will be given, and engineers' reports can be seen.

AGENT WANTED, TO SELL FINE LUBRICATING OILS.

Commission, 10 per cent.

Address, "J. B.," 1, York Villas, Manor-road, Richmond, S.W.

GLASGOW AND THE HIGHLANDS.

ROYAL ROUTE VIA CRINAN AND CALEDONIAN CANALS by the new steamer "COLUMBA," or the "IONA," from GLASGOW at 7 A.M., and from GREENOCK at 9 A.M., conveying passengers for NORTH and WEST HIGHLANDS. See bill, with map and tourist fares, free, at Messrs. CHATTO and WINDUS, Publishers, 74, Piccadilly, London; or by post from DAVID HUTCHESON and Co., 119, Hope-street, Glasgow.

NOUVELLE MONTAGNE COMPANY.—The DIVIDEND for the year 1877 will be PAYABLE—

First,—On the 30th of June next, FIFTY FRANCS PER WHOLE SHARE, coupon No. 26, and TEN FRANCS PER FIFTH OF SHARE, coupon No. 43.

Second,—On the 31st of December next, ONE HUNDRED FRANCS PER WHOLE SHARE, coupon No. 27, and TWENTY FRANCS PER FIFTH OF SHARE, coupon No. 44.

The coupons for encashment to be presented to Messrs. C. DEVAUX and Co., 62, King William-street, E.C., London.

Le Directeur-General de la Société,
Engis, the 10th of May, 1878. V. BOUHY.

THE NEW QUEBRADA COMPANY (LIMITED).

Notice is hereby given, that an ORDINARY GENERAL MEETING of this company will be HELD at the City Terminus Hotel, Cannon-street, on THURSDAY, the 30th May, 1878, at One o'clock, P.M., for the purpose of receiving the directors' report, with balance-sheet and statements of account; for the election of directors and auditor; for the authorisation of additional capital, by borowing to such amount, on such security, and upon such terms and conditions, and by such means as the meeting may prescribe, or as the directors, if authorised by the meeting, may think fit. And in particular to grant any lease or conveyance or other disposition of any land, easements, or property of the company, to additionally secure any money so borrowed, or to secure any reduction or other works, or property or rights, to the parties lending the same; and for transacting the ordinary business of the company.

The Transfer-books of the company will be closed from Thursday, 23rd May, to Thursday, 6th June, both days inclusive.

By order of the Board, N. G. BURCH, Secretary.

Offices of the company, 2, Walbrook, Mansion House, E.C., 13th May, 1878.

MR. TIMOTHY HUGHES,
MINING AGENT AND SHAREDEALER,
59, SEEL STREET, LIVERPOOL.
Reliable information given respecting Welsh and Manx Mines.

MR. HENRY SEWELL MINING ENGINEER AND METALLURGIST.

Twenty-three years' practical experience in Chile, Peru, Mexico, Germany, Hungary, Spain, Sicily, England—five years in Utah, Nevada, and California.

SPECIALITIES.—COPPER MINING: The Smelting of Copper and Argentiferous Copper Ores, with wood fuel or coal in reverberatory furnaces, into matte of 70 per cent., the silver increasing five times. Ten years' practical experience in Chile.—The Reduction of Native Sulphur Ores, as practiced in Sicily, without fuel or iron pans. Six years' practical experience in Spain.

Mining Agent for the Chilian Government on this coast.

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MR. WILLIAM BREDEMEYER, MINING, CONSULTING AND CIVIL ENGINEER, U.S. MINERAL SURVEYOR FOR UTAH AND IDAHO. NOTARY PUBLIC.

Geological examinations; reports on mining properties; surveys mines, railroads, and canals, and superintends the workings of the same. Prepares estimates and plans for opening and working mines. Expert on mining questions before the Courts.

Address, "P. O. Box 1157," Salt Lake City, Utah.

DEVON AND CORNISH MINES.

THE DIFFICULTY experienced by London and other distant Mine Shareholders, in obtaining RELIABLE INFORMATION respecting the state of Devon and Cornish Mines, may be most effectually overcome by corresponding with the undersigned, who from personal inspection and investigation is in a position to give sound advice respecting same.

The advice given will be based upon sound judgment and ability, but at the same time so exceedingly fluctuating is mining that he does not in any way hold himself responsible, or subject to blame, should results not always equal expectations.

A Special Report and Inspection of any Mine in Devon or Cornwall for £2 2s.

SPECIAL BUSINESS IN

PARACOMBE (Lead).	GREAT WHEAL RODD (Lead).
GREAT WHEAL ELEANOR (Tin).	BROWNGELLY (Copper).
COMBMARTEN (Lead)	SOUTH MOLTON (Lead).

Also—WEST OF ENGLAND PEAT SHARES.

Further particulars from—

R. J. RUTTER,
MINE BROKER,
5, PYNE'S TERRACE, EXETER.

CAPTAIN ABSALOM FRANCIS, MINING AGENT, ENGINEER, AND SURVEYOR, GOGINAN, ABERYSTWITH.
FOUR MINES CERTAIN FOR A RISE.

In the Court of the Vice-Warden of the Stannaries. Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACT, 1862, and of the NEW ROSEWARNE MINING COMPANY.—Notice is hereby given, that a PETITION for the WINDING-UP of the above-named company by the Court was, on the 10th day of May inst., presented to the Vice Warden of the Stannaries by William Harvey, Henry Whitford, William West, William John Rawlings, William Husband, Francis Harvey, and Nicholas James West (carrying on business at Hayle, within the said Stannaries, as general merchants, under the firm of Harvey and Company), shareholders and claiming to be also creditors of the said company, and that the said petition is directed to be heard before the Vice-Warden, at the Prince's Hall, in Truro, in the county of Cornwall, on Monday, the 27th day of May instant, at Twelve o'clock at noon.

Any contributory or creditor of the company may appear at the hearing and oppose the same, provided he has given at least two clear days' notice to the petitioners or their solicitors, of his intention to do so, such notice to be forthwith forwarded to P. P. SMITH, Esq., Secretary to the Vice-Warden, Truro.

Every such contributory or creditor is entitled to a copy of the petition and affidavit verifying the same, from the petitioners or their solicitors, within 24 hours after requiring the same, on payment of the regulated charge per folio.

Affidavits intended to be used at the hearing, in opposition to the petition, must be filed at the Registrar's Office, Truro, on or before the 24th day of May inst., and notice thereof must, at the same time, be given to the petitioners, or their solicitors. HODGE, HOCKIN, AND MARRACK, Truro, Cornwall (Solicitors for the Petitioners).

Dated Truro, May 14th, 1877.

IN LIQUIDATION.

RE SWIFT AND DOD,—WITHOUT RESERVE.

TO ENGINEERS, SMITHS, IRON WORKERS, MACHINERY DEALERS, BROKERS, AND OTHERS.

MESSRS. FULLER AND FULLER are instructed to SELL, BY AUCTION, on the premises, the VULCAN IRONWORKS, MELBOURN-BY-ROYSTON, CAMBRIDGESHIRE, one mile from Mildreth Station and three miles from Royston Station on the Great Northern Railway, on Tuesday, May 28th, 1878, at Twelve for One o'clock precisely, the

STOCK AND PLANT OF AN ENGINEER,

Consisting of an 8-horse power VERTICAL BOILER; a 10 horse power three-cylinder HORIZONTAL ENGINE; a 6-horse power combined VERTICAL ENGINE and BOILER; a 5-horse power ditto; a 4 horse power ditto; and a 3 horse power ditto; a 10-horse power PORTABLE BOILER; a 10 in. centre double gear sliding, surfacing, and screw cutting LATHE; a 9 in. centre ditto sliding and surfacing LATHE, by Hind; two 6¼-inch centre screw cutting LATHES; a 30 in. centre face LATHE; an 8 in. centre hand LATHE: a 2 ft. by 2 ft. by 4 ft. planing machine; a 2 ft. by 2 ft. 6 in. by 6 ft. ditto; a 12 in. stroke shaping machine; an 8 in. stroke double gear slotting machine; a double gear drilling machine: 2 single gear bench drills; 7 in. centre treadle lathe; cupola furnace, with fan; 30 cwts. foundry crane; 3 ton hoisting crane; 2 ton travelling crane, with pillars and fittings; horitontal engine, with 7 in. cylinder and 12 in. stroke; iron shafting, with riggers and plummers blocks; driving bands; brickmaking machine; steam saw bench; 30 cwt. steam hammer; mortar; grinding mill; 4 in. hand well pump; 4-wheeled trolley; a quantity of engine and other patterns; nuts, bolts, screws, files, moulding boxes, pig, scrap, and bar iron, general stores, smiths' tools, &c.

May be viewed the Saturday and Monday prior to sale, and catalogues obtained of W. L. C. BROWNE, Esq., 25, Old Jewry, London, E.C.; of HERMAN J. LESCHER, Esq. (Messrs. Wing, Wing, Lescher, and Co., Accountant, 1, Princes street, Bank, London, and Sheffield; of W. H. ROBERTS, Esq, Solicitor, 15, Coleman-street, London; at the principal inns in the neighbourhood; the place of sale; and at the office of the Auctioneers, 25, Bucklersbury, and 70, Queen-street, Cheapside, London, E.C.

ST. NEOT, CORNWALL.

CHINA CLAY WORKS FOR SALE.

MESSRS. HANCOCK AND SONS have received instructions TO SELL, BY AUCTION, at Webb's Hotel, in the borough of Liskeard, in the county of Cornwall, on Tuesday, the 28th day of May instant, at Three o'clock in the afternoon (subject to such conditions as will then be read):—

LOT 1.—The

NORTH WOOD AND HULKER MOOR CLAY WORKS,

Situate in the parish of St. Neot, in the said county, as a going concern, together with the

MACHINERY AND MATERIALS thereon, comprising:—

ONE 12 in. horizontal STEAM ENGINE, nearly new, with one 20 ft. BOILER, winding cage, &c., complete; railroad iron; launders, lifts, and columns of pumps; tools, and all the necessary appliances for working a clay work extensively.

The work is well laid out, and the machinery sufficiently powerful for returning a large quantity of clay.

The setts are held under leases dated the 28th December, 1872, and 1st March, 1876, at rents respectively of £40 and £20 per annum, merging in dues of 2s. and 1s. 9d. per ton respectively. There seems to be a large deposit of good clay in those setts.

LOT 2.

About 150 tons of CHINA CLAY now lying in the dry shed on the said works.

LOT 3.

About 300 tons of WET CLAY now in the tanks. The purchaser of this lot will have permission to use the dry for drying the same.

LOT 4.

A large CLAY SHED at Doublebois Station on the Cornwall Railway, subject to a ground rent of £2 10s. and interest of £4 per year for stone work provided by the Cornwall Railway Company.

Northwood is situate about four miles from the Doublebois Station on the Cornwall Railway, and about the same distance from the Caradon Railway, to which a tramway might easily be laid down, thereby giving direct access by rail to the Port of Looe.

To view, apply to Capt. S. PHILLIPS on the Works; and for further particulars to Messrs. BELL and STEWARD, Solicitors, 49, Lincoln's Inn fields, London, W.C.; Messrs. LUXTON and JOHNSTONE, Solicitors, Tavistock, Devon; Messrs. BAILY and REED, Solicitors, Bolton; Messrs. CHESTER and Co., Solicitors, Staple Inn, London, W.C.; or to Messrs. HANCOCK and SONS, Auctioneers, St. Austell, Cornwall.—Dated May 9th, 1878.

VALUABLE CHINA CLAY WORK, IRON AND TIN MINE, FOR SALE,

In consequence of the death of the late Proprietor, Mr. ROBERT MARTIN.

MESSRS. HANCOCK AND SONS WILL SELL, BY AUCTION, on Wednesday, the 5th day of June next, at Five o'clock in the afternoon, at the White Hart Hotel, St. Austell, in the county of Cornwall (subject to such conditions as will then be produced and read), as a going concern, all that

VALUABLE CHINA CLAY WORK and IRON and TIN MINE, called

ENNIS VATH, otherwise SAVATH,

Situate in the parish of Luxulian, in the said county of Cornwall, including the THREE several LEASES or SETTS under which the same is worked, together with the WHOLE of the valuable

MINING PLANT, MACHINERY, MATERIALS, AND EFFECTS

Thereon, comprising, amongst numerous effects—

An excellent 25 in. cylinder ROTARY ENGINE, with a heavy fly wheel and an 8 ton BOILER, with connections, complete.

One 20 fm. 13 in. drawing lift } All in good working order.
One 8 ,, 8 ,, ,, }
One 10 ,, 9 ,, plunger lift }

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For viewing and for further particulars, apply to Mr. PHILIP PASCOE, Penhale, St. Austell; to Mr. TOM PASCOE, Mount Pleasant, St. Austell; to the Auctioneers at St. Austell; or to Messrs. COODE, SHILSON, and Co., Solicitors, St. Austell, Cornwall.—Dated 10th May, 1878.

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The mine is held under grant in fee from the Government of Newfoundland, containing two miles in length, by half-a-mile in breadth; a Licence of Occupation from the said Government, containing one mile square, west of and adjoining the Crown grant and land held under conveyance of fee-simple interests of former owners.

The title-deeds and documents, and plans and surveys of the property may be seen, and further information may be obtained, by application to PRESCOTT EMERSON, Esq., Q.C., Master-in-Chancery, at his office, in St. John's; or to either of the undersigned solicitors for the parties, or to either of the parties.

Conditions of sale will be published hereafter.

PRESCOTT EMERSON, Q.C., Master in Chancery,
St. John's, Newfoundland, January 23rd, 1878.

For further particulars, apply to C. T. BENNETT, Esq., No. 55, Queen's-square, Bristol; Messrs. HENRY BATH and SON, Gresham House, London; or to PINSENT and GREENE, Solicitors to the Plaintiff; WINTER and CARTER, Solicitors for Defendant McKay.

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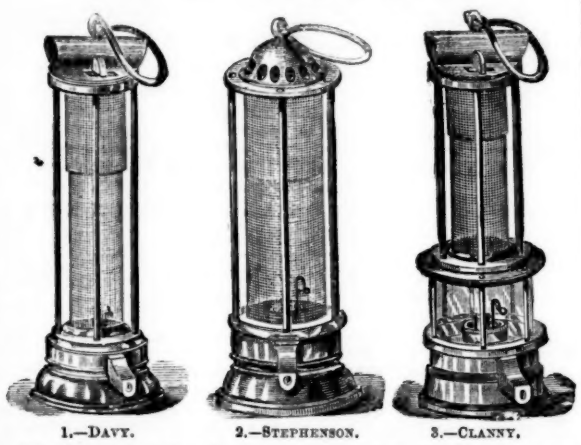

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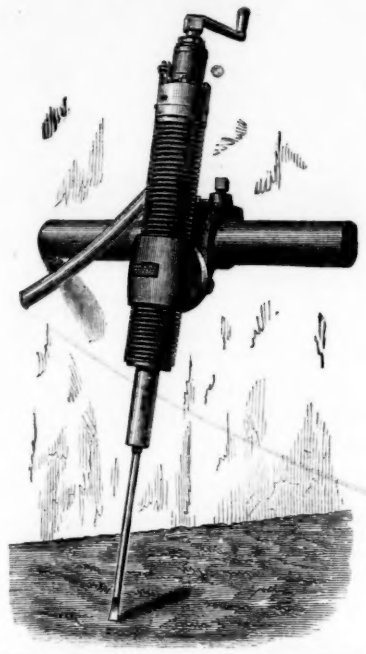

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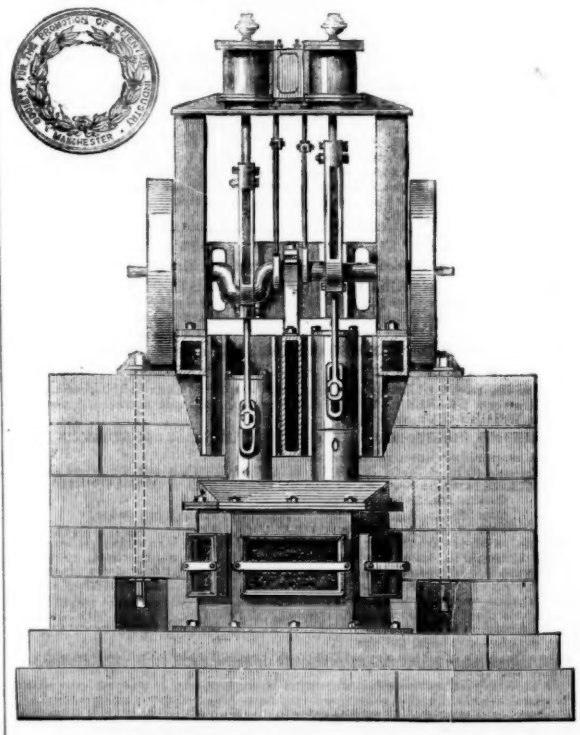

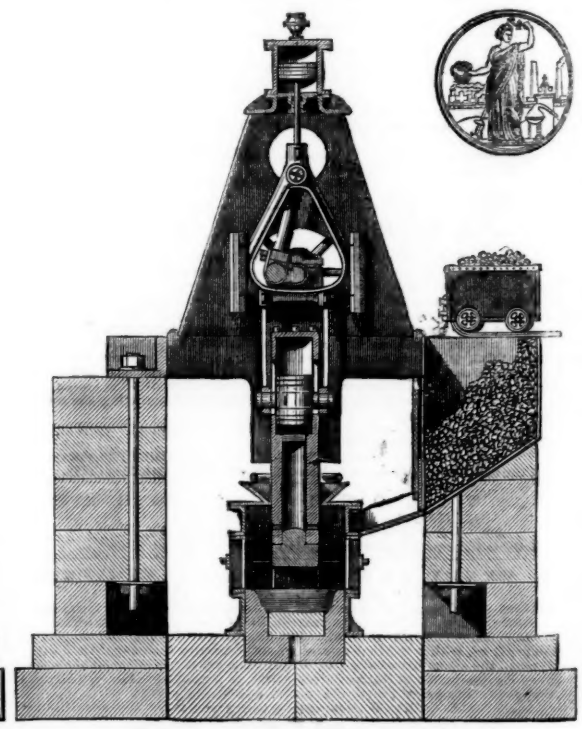

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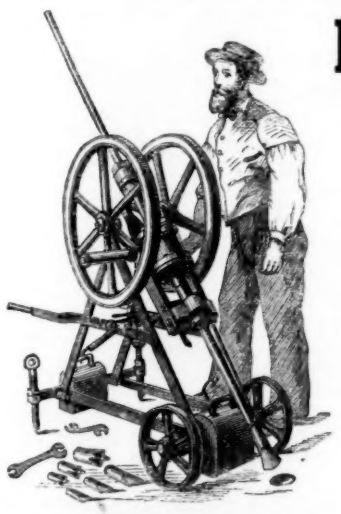

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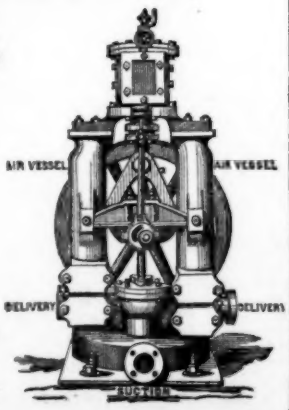

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THE MINING SHARE LIST.

BRITISH DIVIDEND MINES.

Shares	Mines.	Paid.	Last wk.	Clos. pr.	Total divs.	Per sh.	Last pd.
1500	Alderley Edge, *c*, Cheshire*	10 0 0	—		12 11 8	0 5 0	Jan. 1876
4000	Brookwood, *c*, Buckfastleigh	1 15 0	1	⅛ 1	3 16 0	0 2 0	Nov. 1875
2000	Bryn Alyn,* *l*, Denbigh	10 0 0	—		0 7 0	0 7 0	Jan. 1877
400	Cashwell, *l*, Cumberland*	2 10 0	2¾	1¼ 2¾	1 9 6	0 2 0	Aug. 1876
1000	Carn Brea, *c*, *t*, Illogan†	36 7 6	40	39 41	308 0 0	1 0 0	Feb. 1874
2500	Cook's Kitchen, *t*, Illogan†	24 4 9	1⅛	1⅜ 1⅝	11 17 0	0 7 6	Jan. 1873
10240	Devon Gt. Consols, *c*, Tavistock†	1 0 0	2⅛	2¼ 2¾	116 15 0	0 5 0	July 1877
4296	Dolcoath, *c*, *t*, Camborne	10 14 10	31	30 31	112 6 3	0 5 0	Mar. 1878
5000	East Black Craig,* *l*., Scotland	5 0 0	—		0 10 0	0 10 0	Feb. 1877
800	East Darren, *l*, Cardiganshire	32 0 0	—		235 10 0	1 0 0	Aug. 1876
6400	East Pool, *t*, *c*, Illogan	0 9 9	9	8¼ 9	15 6 9	0 2 0	Feb. 1878
40000	Glasgow Cara... *c** [30,000 £1 p., 10,000 15*s.* p.]			1⅜ 1⅝	0 13 4	0 0 6	Feb. 1878
7500	Gorsedd and Merllyn Cons., *l*, Flint	2 10 0		4¼ 4½	0 5 0	0 5 0	Aug. 1877
15000	Great Dyliffe,* *l*, Montgom	4 0 0	3	2 3	0 2 6	0 2 6	Apr. 1876
15000	Great Laxey, *l*, Isle of Man*	4 0 0	19	18 19	23 11 0	0 8 0	Apr. 1878
615	Gt. Retallack, *l*, *bl*, Perranzabuloe	5 18 6	—		0 1 6	0 1 6	May 1876
8400	Green Hurth, *l*, Durham*	0 6 0	1¼	1⅛ 1¼	1 18 0	0 3 0	Mar. 1878
20000	Grogwinion, *l*, Cardigan*	2 0 0	3½	3 3½	0 14 0	0 2 0	Jan. 1878
9830	Gunnislake (Clitters'), *t*, *c*	5 5 0	2¾	2½ 2¾	0 13 9	0 1 0	Oct. 1876
60000	Holmbush, *a*, *c*, *s-l*, Callington*	1 0 0	1¼	1⅛ 1¼	0 4 6	0 0 6	Sept. 1877
2800	Isle of Man, *l*, Isle of Man*†	25 0 0	—		82 5 0	0 10 0	Feb. 1876
20000	Leadhills,* *l*, Lanarkshire	6 0 0	4¼	3¾ 4¼	0 15 0	0 3 0	Mar. 1878
4000	Lisburne, *l*, Cardiganshire	18 15 0	—		585 10 0	1 0 0	Feb. 1878
14000	Llanidloes,* *l*, Montgomery	3 0 0	1¼	¾ 1¼	0 9 0	0 4 6	Nov. 1876
9000	Marke Valley, *c*, Linkinhorne	5 3 6	⅝	⅛ ⅝	7 15 0	0 2 0	Jan. 1876
10000	Mellanear Copper, Hayle*	2 0 0	4	3 4	0 2 0	0 2 0	Jan. 1878
9000	Minera Mining Co., *l*, Wrexham*	5 0 0	18	14 16	67 13 2	0 6 0	May 1878
20000	Mining Co. of Ireland, *c*, *c*, *l**	7 0 0	—		23 17 6	0 2 6	Jan. 1878
444	North Busy, *c*, Chacewater	3 9 6	5	4 5	1 10 0	1 0 0	July 1877
10289	North Hendre, *l*, Wales	2 1 0	—		2 2 6	0 10 0	Mar. 1878
30000	Panty Mwyn,* *l*, Mold (8794 iss.)	2 0 0	3	2¼ 3	0 1 0	0 1 0	Feb 1877
6000	Pedn-an-drea Con., *t*, Redruth	0 8 6	5½	5 5½	0 9 0	0 9 0	June 1877
5000	Penhalls, *t*, St. Agnes	3 2 6	1	¾ 1	3 13 6	0 2 0	July 1878
6000	Pennant, *l*, *bar*, North Wales*	5 0 0	5	4 5	0 10 0	0 5 0	Mar. 1878
45793	Penstruthal,* *t*, *c*, Gwennap	2 0 0	6*s.*	4*s.* 5*s.*	0 2 8	0 0 8	Nov. 1875
18000	Prince Patrick,* *s-l*, Holywell	1 0 0	2¼	1¾ 2¼	0 14 0	0 1 3	Jan. 1876
10000	Red Rock,* *l*, Cardigan	2 0 0	2½	2 2½	0 4 0	0 2 0	Jan. 1878
12000	Roman Gravels, *l*, Salop*	7 10 0	8	7½ 8	7 15 0	0 5 0	Mar. 1878
512	South Caradon, *c*, St. Cleer	1 5 0	65	60 70	742 10 0	1 0 0	Mar. 1878
6123	South Condurrow, *t*, *c*, Camborne‖	6 5 6	11½	11 11½	3 13 0	0 8 0	Apr. 1878
12000	St. Harmon,* *l*, Montgom	3 0 0	3¾	2½ 3½	0 6 0	0 3 0	July 1877
10000	So. Pr. Patrick,* *s-l*. (8000 sh. issued)	1 0 0	—		0 7 0	0 1 0	Oct. 1878
1000	Tankerville, *l*, Salop*	6 0 0	4¾	4 4¾	4 17 0	0 5 0	Dec. 1876
4000	Tincroft, *c*, *t*, Pool, Illogan†	9 0 0	12	10 11	50 8 6	0 5 0	May 1877
15000	Van, *l*, Llanidloes*	4 5 0	20½	19½ 20½	22 15 6	0 12 0	Jan. 1878
3000	W. Chiverton, *l*, Perranzabuloe†	12 10 0	12	9 11	55 10 0	0 10 0	Feb. 1878
4783	West Poldice, St. Day	10 0 0	—		1 19 0	0 4 0	July 1876
512	West Tolgus, *c*, Redruth	95 10 0	61	xd 58 60	28 5 0	1 10 0	May 1878
2048	West Wheal Frances, *t*, Illogan	28 1 3	3	2½ 3	3 12 6	0 5 0	Oct. 1872
600	West Wheal Seton, *c*, Camborne†	47 0 0	14	12 14	446 0 0	0 15 0	Apr. 1878
12000	West WyeValley,* *l*, Montgom	3 0 0	3¼	2 3	0 12 0	0 3 0	Nov. 1877
1024	Wh. Eliza Consols *t*, St. Austell	18 0 0	—		18 0 0	1 0 0	Apr. 1878
2048	Wheal Jane, *t*, Kea	2 13 10	1	¾ 1	8 5 0	0 5 0	July 1876
4295	Wheal Kitty, *t*, St. Agnes	5 4 6	1¾	1½ 2	11 19 6	0 2 6	Dec. 1874
25300	Wh. Newton, *a*, *c*, *s*, *t*, Calstock*	1 0 0	—		0 8 6	0 4 0	Sept. 1877
80	Wheal Owles, *t*, St. Just‖	98 15 0	35	30 35	522 10 0	4 0 0	Aug. 1872
3000	Wheal Peevor, *t*, Redruth	7 11 0	6¾	6¼ 6¾	0 5 0	0 5 0	Apr. 1878
3000	Wheal Prussia, *t*, Redruth	0 5 0	7½	7 7½	0 4 0	0 1 0	July 1877
10000	Wye Valley, *l*, Montgomery*	3 0 0	2	1½ 2	0 10 6	0 4 6	Oct. 1876

FOREIGN DIVIDEND MINES.

35500	Alamillos, *l*, Spain*†	2 0 0	1½	1 1⅛	1 19 3	0 1 0	April 1878
80000	Almada and Tirito Consol., *s*†	1 0 0	⅜	⅛ ⅜	0 6 3	0 1 0	May 1876
20000	Australian, *c*, South Australia†	7 7 6	2	1½ 2	0 19 6	0 1 6	July 1877
10000	Battle Mountain,* *c*, (6240 part pd.)	5 0 0	—		0 10 0	0 10 0	Nov. 1875
15000	Birdseye Creek, *g*, California*	4 0 0	1	¾ 1	0 14 0	0 2 6	June 1874
20000	Capr Copper Mining,*† So. Africa	7 0 0	30	28 30	30 10 0	0 17 6	Mar. 1878
84433	Cedar Creek, *g*, California*	5 0 0	—		0 5 0	0 2 6	June 1872
35000	Cesena Sul. Co., Romanga, Italy*	10 0 0	—		0 10 6	0 3 0	Aug. 1877
15000	Chicago, *s*, Utah*	10 0 0	1½	½ 1	2 8 0	0 4 0	Nov. 1876
65000	Colorado United, *s-l*, Colorado*†	5 0 0	3¼	2½ 3	0 13 6	0 4 0	Jan. 1878
10000	Copiapo, *c*, Chili* (£20 shares)	16 15 0	—		7 11 5	0 3 0	May 1877
170000	Don Pedro North del Rey*†	0 15 0	⅝	⅜ ⅝	2 5 9	0 2 0	Mar. 1872
23500	Eberhardt & Aurora, *s*, Nevada*†	10 0 0	7¼	6½ 7	1 8 0	0 3 0	Dec. 1877
70000	English & Australian, *c*† S. Aust.	2 10 0	1¼	1 1¼	2 15 9	0 1 0	Mar. 1877
30000	Flagstaff, *s*, Utah*	10 0 0	¾	¾ 1	4 2 0	0 5 0	July 1878
25000	Fortuna, *l*, Spain*†	2 0 0	5¼	4¾ 5¼	6 19 10	0 5 0	April 1878
55000	Frontino & Bolivia, *g*, New Gran.*†	2 0 0	2	1½ 2	0 1 0	0 1 0	June 1876
30000	Gold Run, *hyd.*	1 0 0	—		0 2 4	0 0 4	Oct. 1872
68000	Kapunda Mining Co. Australia†	1 3 0	—		0 2 4	0 0 6	June 1878
20000	Last Chance, *s*,* Utah	5 0 0	⅞	¾ 1¼	0 14 0	0 2 0	July 1878
15000	Linares, *l*, Spain*†	3 0 0	6	5½ 6	17 7 10	0 5 0	April 1878
65000	London and California, *g*†*	2 0 0	⅜	⅜ ⅝	0 1 0	0 1 0	July 1875
7637	Lusitanian, Portugal*† (£5 sh.)	3 10 0	—		1 11 6	0 1 6	Mar. 1873
8000	Manum Copperopolis of Utah, *c*, *	10 0 0	—		0 5 0	0 5 0	Dec. 1872
5000	Mountain Chief, *s*, Utah*	10 0 0	—		0 4 0	0 4 0	Jan. 1873
10000	Pontgibaud, *s-l*, France†	20 0 0	28	26 28	25 8 0	1 11 0	Nov. 1877
100000	Port Phillip, *g*, Clunes*†	1 0 0	⅝	⅜ ⅝	1 10 0	0 1 0	Jan. 1878
54000	Richmond Consols, *s*, Nevada*†..	5 0 0	9¾	9 9½ xd	4 11 6	0 7 6	May 1878
40000	Santa Barbara,* *g*, Brazil	0 10 0	1⅜	1¼ 1½	0 4 9	0 1 0	April 1878
120000	Scottish Australian Mining Co.*†	1 0 0	2	1¾ 2	15 per cent.		Nov. 1877
80000	Scottish Austral. Mining Co., New	0 10 0	⅞	¾ ⅞	15 per cent.		Nov. 1877
112500	Sierra Buttes, *g*, California*†	2 0 0	2	1¾ 2	1 18 0	0 2 0	Oct. 1877
60000	South Aurora, *s*, Nevada*	5 0 0	¾	½ ¾	0 14 2	0 2 0	Nov. 1873
£253000	St. John del Rey*† (£5 stock & multiples dealt in)		305	315	½ year		20 p. ct. for Dec. 1876
20000	Tolima, *g*,* So. America	5 0 0	—		0 11 6	0 6 6	May 1874
25000	Victoria (London)*, *g*, Australia	1 0 0	¾	⅝ ¾	0 12 6	0 0 7½	Jan. 1878
15000	Western Andes, *s*,* New Granada	5 0 0	—		0 12 0	0 12 0	July 1876
91000	W. Prussian (5500 pref. sh. 10*l*. pd)	10 0 0	11	10½ 11	1 8 0	0 4 0	Jan. 1878

NON-DIVIDEND FOREIGN MINES.

Shares.	Mines.	Paid.	Last Pr.	Clos. Pr.	Last Call.
5000	Anguilla Phosphate, West Indies (4000 issued)	10 0 0	—		Fully pd
12000	Argentine, *g*, Argentine Republic	5 0 0	¾	¾ ¾	Fully pd
3000	Bellavista, *s*, Peru* (£10 shares)	10 0 0	—		Fully pd.
30000	Blue Tent, *hyd.*, California	5 0 0	3	2½ 3	Fully pd.
49935	Chontales, *g*, *s*, Nicaragua*†	2 0 0	⅛	⅜ ⅛	Fully pd.
16000	Condes of Chili, *s-l*	5 0 0	1	¾ 1	Fully pd.
20000	English Australian, *g*, Victoria*	1 0 0	⅞	⅝ ⅞	Fully pd.
85000	Excelsior Hydraulic Gold Washing Co., California*	6 0 0	—		Dec. 1871
100000	Exchequer, *g*, *s*, California*†	1 0 0	⅛	⅛	Fully pd.
40000	Holcombe Valley, *g*,* California	1 0 0	—		Fully pd
8000	Hornachos,* *s-l*, Spain	10 0 0	13	12½ 13	Fully pd.
12000	Hultafall,* *l*, *bl*, Orebro, Sweden	5 0 0	5	4½ 5½	Fully pd.
12000	Hunter Consolidated, *s-l*, Utah	10 0 0	—		Fully pd.
20000	Imperial Brazilian Collieries, Brazil*	5 0 0	—		Fully pd.
100000	I. X. L., *g*, *s*, California*	1 0 0	—		Fully pd.
50000	Javali, *g*, Nicaragua*	2 0 0	¼	⅛ ¼	Fully pd.
3500	La Manche, *l*, Newfoundland	10 0 0	—		Fully pd.
12000	Lanestosa,* *l*, *s*, Viscaya, Spain (£2 shares)	1 15 0	—		Mar. 1876
75000	Malabar, *g*, Colombia* (67165 issued)	1 0 0	¾	⅛ ¾	Fully pd.
40000	Malpaso, *g*, Colombia* (7400 pref. shares, fully paid)	1 0 0	⅜	¼ ⅜	Fully pd.
12000	Menzenberg, *c*, Honnef, Germany*	5 5 0	—		Fully pd
4588	New Bensberg, *i*, *l*, Germany	5 0 0	—		Nov. 1876
60000	New Quebrada, *c*, Venezuela*	5 0 0	1⅝	1⅜ 1⅝	Fully pd.
20000	New Zealand Kapanga, *g*, Coromandel*	5 0 0	⅜	⅜ ⅜	Fully pd.
3000	Oregon,* *g*, Oregon, U.S. (preference shares)	4 0 0	—		Fully pd.
50000	Panuelillo, *c*, Chili*† (£20000 debentures)	4 0 0	¾	⅝ ¾	Fully pd.
80000	Pestarena United, *g*, Italy*†	3 0 0	⅜	¼ ⅜	Fully pd.
50000	Providencia and New Rosario, *s*, Mexico*	1 0 0	—		Fully pd
50000	Rica, *g*, Colombia* (40000 issued)	1 0 0	¾	⅛ ¼	Fully pd.
£2,181,000	Rio Tinto,* *c*, Huelva, Spain	Stock	60	59 61	Fully pd.
100000	Rosa Grande, *g*, Brazil*† (£1 shares)	0 19 0	⅛	⅛	July 1872
30000	Russia Copper, Oreuburg and Ufa*†	10 0 0	1½	1¼ 1½	Fully pd
25000	San Pedro, *c*, Chili*	2 0 0	½	¼ ½	Fully pd.
10000	Silver Plume, *s*, Colorado*	1 0 0	—		Fully pd.
30000	Tecoma, *s*, Utah*	10 0 0	⅝	⅜ ⅝	Fully pd.
43174	United Mexican, *s*, Mexico*†‖	29 0 3	2	1¾ 2	May 1875
14000	Utah, *g*, *s-l*, Utah*	5 0 0	—		Fully pd.
50000	Virneberg, *c* Rheinbreitbach, Germany* (£2 shares)	1 15 0	—		Jan. 1878
75000	Yorke Peninsula, *c*, South Australia	1 0 0	—		Fully pd.
40000	Yorke Peninsula, *s*, South Australia Preference	1 0 0	1	¾ 1	Fully pd.

§ Have made calls since last dividend was paid.

FOREIGN AND MISCELLANEOUS STOCKS, BONDS, LOANS, AND TRUSTS.

	Closing Prices.	
Argentine, 1868, 6 per cent.	73½	74¼
Bolivia, 6 per cent.	25	26
Brazilian, 1865, 5 per cent.	92	94
Chilian, 1866, 7 per cent.	103	104
City of Providence, 5 p.c. coupon bnds	100	102
Egyptian, Gov preference	57¼	57¾
Do., unified debt, scrip	33¼	33¾
Do., 7 per cent., V.M.L.	73	76
Do., 9 per cent. guar.	78	83
Do., K. Daira Sanieh	41	43
Foreign and Col. Gov. Trust, 6 p. ct.	62	66
Do., 5 per cent., 2d issue	50	55
Do., 6 per cent., 3d issue	55	60
Do., 1872, 4th issue	50	55
Do., 1873, 5th issue	52	57
Peruvian, 1870, 6 per cent.	15¾	16
Do., 1872, 5 per cent	13¼	13¾
Russian, 5½ per cent. L. Mort.	68	72
Spanish, Quicksilver Mort., 5 p. ct.	98	100
United States Mort., 6 per cent.	100	102

NON-DIVIDEND MINES.

Shares.		Paid.	Last wk.	Clos. pr
40000	Aberdaunant, *l*, Llanidloes*	1 0 0	⅛	¾ 1
10000	Aberystwith,* *s-l*, Cardigan	5 0 0	—	
80	Albion, *i*, Cornwall	100 0 0	—	
7800	Alvig. & Burng., *t*, St. Aust.	3 0 0	1¾	1⅛ 1¾
12000	Assneton, *l*, Carnarvonshire*	5 0 0	1⅛	¾ 1
50000	Ballycummisk,* *c*, Schull	2 0 0	—	
12000	Bedford Unit.,* *c*, Tavist. (1*l*. liab.)	0 1 0	¼	⅛ ¼
28000	Belstone,* *c*, Devon (27,000 fy. pd.)	1 0 0	—	
8000	Blaen Caelan,* *l*, Cardigan	3 0 0	5	4¾ 5
3937	Blue Hills, *t*, *c*, St. Agnes	3 12 6	1	¾ 1
30000	Bodidris,* *l*, *bl*, Denbighshire	1 0 0	1⅜	1¼ 1⅜
1000	Bollihope Vale,* *s-l*, Durham	5 0 0	—	
200	Botallack, *t*, *c*, St. Just‖	123 15 0	—	
2000	Bowden Hill,* *m*	1 0 0	—	
8000	Bradwell Moss Rake	1 0 0	1	⅜ 1
50000	Cambrian,* *s-l*, *c*, Cardiganshire	2 0 0	3¾	3 3¾
3348	Cargoll, *s-l*, Newlyn‖	7 4 0	2¾	2 2¾
10000	Caron, *l*, Cardigan*	2 0 0	2¾	2 2½
20000	Central Foxdale, *l*, I. of Man* (2*l*. sh.)	1 5 0	—	
10000	Central Van,* *l*, *bl*, Llanidloes	5 0 0	—	
5120	Clementina, *l*, Llanrwst*	1 0 0	1¼	1 1¼
7500	Combellack,* *t*, Wendron	2 0 0	—	
6000	Combmartin, *s-l*, North Devon	0 7 0	⅛	¼ ⅛
24100	Court Grange, *s-l*, Cardiganshire	1 0 0	1½	1 1½
2000	Cwm Dwyfor,* *c*, *s-l*, Carnarvonsh	1 0 0	—	
3000	Cwmystwith (New) [5*l*. shares]	4 0 0	—	
1280	D'Eresby Cons., *l*, *bl*, Carnarvon	10 0 0	13	11 13
512	D'Eresby Mountain, *l*, *bl*, Llanrwst	20 0 0	100	80 100
20000	Denbighshire Consolidated, *l**	3 0 0	1¼	¾ 1¼
12000	Derwent,* *l*, Durham	4 0 0	1⅞	1⅜ 1⅞
10000	Dubby Syke, *l*, Durham*	0 15 0	⅜	⅛ ⅜
6144	East Caradon, *c*, St. Cleer‖	2 19 0	1	¾ 1
4000	East Chiverton, *l*, Perranzabuloe	7 1 0	3	2½ 3
3000	East Craven Moor*, *l*, Pateley Bdge	10 0 0	10	9 10
800	East Goginan, *l*, Cardigan	2 0 0	—	
18000	East Van, *i*, Llanidloes*	5 0 0	4¾	4½ 4¾
1732	East Wh. Lovell, *t*, Helston	9 1 0	⅛	¼ ⅛
10000	Elgar,* *s-l*, Cardiganshire	1 0 0	⅝	⅜ ⅝
8000	Fronvellan, *l*, Mont.* [4000 sh. fy. pd.]	1 0 0	—	
3950	Gawton, *c*, Tavistock	4 5 6	⅛	⅛ ⅛
12000	Glan Clwyd,* *l*, Gwyddelwern	1 0 0	—	
14000	Glenroy,* *s-l*, Isle of Man	4 5 0	⅞	¾ ⅞
10000	Glyn,* *l*, Llanidloes	2 0 0	¾	⅝ ¾
12000	Goginan, & Level Newydd, Card., *l*	2 10 0	—	
100000	Gold, *g*, Merionethshire	1 0 0	—	
20000	Goreu,* *s-l*, Carmarthen	1 0 0	1	¾ 1
20000	Gt. E. Foxdale, *l*, I. of Man (1*l*. sh)	0 18 0	—	
12000	Great Holway,* *l*, Flintshire	5 0 0	5¼	5 5¼
9500	Great Pant-y-Pybey, *l*, Holywell	2 0 0	—	
256	Gt. Wheal Eleanor, *t*, North Bovey.	1 15 0	2	1¾ 2
10000	Harehope Gill,* *t*, Durham (£1 sh.)	0 5 0	—	
600	Hartington Moor,* *carb. l*, Derby	1 0 0	2	1⅛ 2
6400	Harwood,* *l*, Durham	0 15 0	5*s.*	4*s.* 5*s.*
1024	Herod-foot, *i*, near Liskeard†	8 10 0	7	⅝ 7
18000	Hingston Down, *c*. Calstock*†	0 5 0	⅛	⅜ ⅛
5000	Hush Eisteddfod Minera,* *l*	2 0 0	—	
200	Islay,* *l*, Scotland	28 0 0	—	
2500	Killaloe, *sl*, Tipperary‖	1 0 0	—	
6000	Killifreth, *t*, Chacewater	2 3 6	⅝	⅝ ¾
25000	Kingston Con., *s-l*, Stoke Climsland.	1 0 0	—	
	Ditto, preference	1 0 0	1⅛	1 1⅛
12000	Ladywell,* *l*, Salop	2 10 0	1	¾ 1
12000	Ditto, 10 per cent. pref., 1*l*. each	0 10 0	⅝	⅛ ⅝
2500	Levant, *c*, *t*, St. Just	9 18 6	—	
6000	Livingstone Consols, *t*, St. Agnes	0 10 0	1	¾ 1
5120	Lovell, *t*, Wendron	0 16 0	2	1½ 2
25000	Llanrhaiadr, *l*, Montgomery*	2 0 0	—	
30000	Llanrwst,* *l*, Carnarvon	2 0 0	2½	3 4
24	Mawston,* *l*, South Wales	50 0 0	60	55 60
6000	Mediyn Moor, *t*, Wendron	1 17 4	—	
11000	Melyndwr, *i*. Cardigan*	3 0 0	1¼	¾ 1¼
11000	Monydd Gorddu, *l*, Cardigan* (Red.)	5 0 0	—	
12000	Morfa Du, *z*, *g*, *s*, Anglesea	1 0 0	⅞	⅝ ⅞
25000	Nant-y-Ronen, *s-l*, Cardigan*	1 0 0	—	
15000	Nascent Copper*	1 0 0	—	
4768	New Bronfloyd,* *l*, Cardigan (5*l*. sh.)	3 16 0	4¼	4¼ 4½
8000	New Dolcoath, *t*, *c*, Camborne*	3 0 0	1¼	1¼ 1⅜
20000	New East Foxdale, *s-l*, Isle of Man.	0 15 0	—	
18000	New Fowey Consols, *t*, St. Blazey*.	3 0 0	2	1½ 2
1492	New Hendra, *t*, Breage	3 9 0	—	
3200	New South Merllyn, *l*, Flint*	2 10 0	1½	¾ 1
3500	New Tincroft,* *t*, Lelant	0 0 0	3	2½ 3
5000	New Wheal Emma, *c*, Buckfastleigh	2 0 0	—	
4000	North Cornwall,* *l*, Cornwall	5 0 0	5½	5¼ 5½
35000	North Laxey,* Isle of Man	1 0 0	¾	⅝ ¾
2000	North Levant, *t*, *c*, St. Just‖	12 8 0	1	¾ 1
20000	North Prince Patrick,* *l*, Holywell.	1 0 0	—	
5936	North Treakerby, *c*, St. Agnes	5 7 10	—	
2000	North Wheal Towan, *t*, *c*, Illogan	1 19 6	—	
6400	Oola Hills,* *s-l*, Limerick	5 0 0	—	
12000	Pandora,* *l*, Carnarvon	2 0 0	1	¾ 1
6000	Park Valley,* *s-l*, North Devon	0 4 0	1	¾ 1
16923	Parys Mountain,* *c*, Anglesea	3 0 0	½	⅜ ½
12000	Phœnix, & W. Phœnix, *t*, *c*, Linh, §	5 7 3	5	4½ 5
4000	Pateley Bridge, *l*, Yorkshire	5 0 0	2¾	2½ 3
12000	Plynlimmon, *l*, Llanidloes*	2 0 0	6*s.*	4*s.* 6*s.*
10000	Port Nigel,* *s-l*, Carnarvonshire	2 0 0	⅛	¼ ⅛
2000	Prideaux Wood, *t*, Llanivery	5 0 0	—	
5182	Prince of Wales, *c*, Calstock‖	2 6 0	2*s.*	1*s.* 2*s.*
6000	Relistian Consols, *c*, Gwinear	0 10 0	⅝	½ ⅝
15000	Rookhope, *l*, Durham*	1 10 0	1	¾ 1
5000	Silvercross,* *c*, *t*, Marazion	1 0 0	—	
4200	Snowbrook, *s-l*, Montgomery	5 0 0	—	
6000	So. Cwmystwith, *l*, Cardiganshire.	2 0 0	4	3 4
4000	South Darren, *l*, Cardigan*	1 10 0	2½	1⅞ 2⅛
30000	South de Eresby Mountain, *l*	1 0 0	1⅜	1⅛ 1⅜
512	South Dolcoath, *c*, *t*, Redruth	12 5 0	1½	1 1½
5000	So. Molton Cons., *s-l*, No. Devon	0 3 6	1	¾ 1
18000	South Roman Gravels, *l**	1 10 0	⅜	⅛ ⅜
6000	South Roskear, *t*, *c*, Camborne	7 5 0	—	
6000	South Tolcarne, *t*, *c*, Camborne	2 11 6	¾	⅝ ¾
937	South Wheal Crofty, *c*, Illogan	40 0 10	8	7 8
4500	South Wh. Frances, *c*, Illogan†	7 12 4	2	1½ 2
6000	St. Lawrence, Amal., *l*, Flintshire*	2 0 0	—	
10000	St. Patrick, *i*, Halkin, Holywell*	1 0 0	1⅜	⅞ 1⅛
6000	Success, &c., *i*, Derb. (12,000*l*. called)	1 0 0	—	
16000	Sunnyside,* *l*, Durham	2 0 0	2½	2 2½
30000	Talybont, *s-l*, Cardiganshire	1 0 0	1¼	1 1¼
9400	Teesdale,* *i*, Durham	1 0 0	⅛	⅜ ⅛
14000	Teign Valley, *i*, *bar*., Bridford	1 0 0	—	
10000	Temple, *i*, Cardigan*	1 0 0	4¼	4¼ 4¾
10000	Tolgus Consols,* *c*, Redruth	5 0 0	4½	4 4½
12000	Treneigh Consols, *s-l*, St. Ive	0 9 6	⅜	⅛ ⅜
5000	Treleigh Wood, *t*, Redruth	6 1 0	—	
12000	Trethellan, *s-l*, Crantock*	2 0 0	—	
640	Truro*, *i*, Nerquis, Flintshire	10 0 0	—	
10000	Tyn-y-Fron,* *l*, Cardigan	1 0 0	1⅜	1⅜ 1⅝
20000	Van Consols, *i*, Llanidloes*	2 10 0	—	
1000	Vaughan*, *i*., Cardiganshire	10 0 0	—	
12000	West Assheton, *i*, Carnarvon	1 0 0	1	¾ 1
6000	West Basset, *c*, Illogan‖	6 6 8	¾	½ ¾
5500	West Combmartin, *s-l*, North Devon	1 0 0	—	
7000	Ditto	0 2 6	—	
3000	W. Craven Moor, *i*, Pateley Bridge*.	10 0 0	10	9 10
5000	West Godolphin, *t*, *c*, Breage	2 10 0	1½	1 1¼
12000	West Goginan,* Cardiganshire	2 0 0	⅜	¼ 1¼
10000	West Llangynog, *s-i*, Montgomery	2 0 0	—	
3000	West Mary Ann, *i*, Menheniot	0 3 6	¾	⅝ ¾
50000	West Milwr, *s-i*, Flint	1 0 0	—	
5000	West of England Granite Company.	2 0 0	2	2
20000	West Pateley Bridge, *i*, Yorkshire	1 0 0	2½	2 2½
1000	West Roskear, *t*, *s-i*, *bl*, *c*, Camborne.	2 0 0	17	15 17
12000	West Tankerville,* *i*, Salop	3 0 0